Table 3-1 Summary of Soil Quality Test Results Former Morey Property Phase II ESA Downers Grove, Illinois Page 1 of 2

<del></del>	Residentia	Tier I Soil I	Remediation	Objectives *	Indu	strial/ Comm	ercial Tier	I Soil Reme	diation Obje	ctives *						ļ			
	T (COIOCTING	1,0,7,00		Groundwater	Industrial (	Commercial	Construc	tion Worker	Migration to	Groundwater			1						
			. T	1			_	1		Mark Strange		SB-01	SB-01	SB-01	SB-02	S8-02	SB-02	S8-03	SB-0
					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			The Market			Laboratory Reporting	14-16	52-54	80-82	14-16	14-16' (Dup.)	68-70	18-20'	38-40
arameter	Ingestion	Inhalation	Class I	Class II	Ingestion	Inhalation	Ingestion	Inhalation	Class I	Class II	Limit	14-16	52-54	00-02	14-10	[14-10 (Dup.)]		<u> </u>	
oil pH- Method 9045C		1									Ll		1	l				r - 454	NA.
on pri- mediod 3043C	NE	NE .	NE	NE	NE	NE	NE	I NE	NE	NE		7.79	7.76	7.75	7.36	8.04	7.83	NA .	NA.
1													4						
ofatile Organic Compounds (V				1 46	200.000	100,000	200,000	100,000	16	1 16	0196 - 0.0257	BDL.	BOL	BOL	0.0300	0.0293	0.0272	0.0384	0.04
celone	7,800	100,000	16	16		100,000	.2.300	2	0.03	0.17	.00392 - 0.00513	BDL.	BDL	BDL	BDL	BDL	BDL	BDL	BD
enzene	12	0.8	0.03	0.17	100			3.000	0.6	0.6	00392 - 0.00513	BDL	BBL	BDL	BDL	BDL	BDL	BDL	BD
romodichloromethane	10	3,000	0.6	0.6	92	3,000	2,000 16,000	140	0.8	0.8	.00392 - 0.00513	BOL	BOL	BOL	BDL	BDL	-BDL	BDL	BD
Bromoform	81	53	0.8	8.0	720	100		NE NE	NE NE	NE NE	00392 - 0.00513	BOL	BDL	BDL	BDL:	BDL	BDL	BDL	BO
iromomethane	NE	NE	NE	NE	NE	NE	NE	NE NE	NE NE	NE NE	0.00785 - 0.0103	BDL	BDL	BDL	BDL.	BDL	BDL	BOL	8D
Butanone	NE	NE	NE	NE	NE	NE_	NE		32	160	.00392 - 0.00513	8DL .	BOL	BDL	BDL :	BDL	BDL	BDL	-B0
arbon Disulfide	7,800	720	32	160	200,000	720	20,000	9.0	0.07	0.33	.00392 - 0.00513	BDL.	BOL	BDL	BDL	BDL	BDL	BDL	- 60
arbon Tetrachlonde	5 -	0.3	0.07	0.33	44	0.64	410	0.9	1	6.5	. 00392 - 0.00513	BOL	BDL	BDL	BDL	BDL	BDL	BDL	BD
hlorebenzene	1,600	130	1	6.5	41,000	1,300	41,000	1,300	0.4	0.4	00392 - 0.00513	BOL	BDL	BOL	BDL	BDL	BDL	BDL	BC
hlorodibromomethane	1,600	1,300	0.4	0.4	:41,000	1,300	41,000	1,300	NE	NE NE	00392 - 0.00513	BDL	BDL	BDL	BOL	BDL	BDL	BDL	BD
hioroethane	NE	NE	NE	NE	NE_	NE	:NE	NE		2.9	00392 - 0.00513	BDL.	BDL	BDL	BDL	BDL	BDL	. BDL	BD
hloroform	100	0.3	0.6	2.9	940	0.54	2,000	0.76	0.6	NE NE	.00392 - 0.00513	BDL	BOL	BDL	BDL	BDL	BDL	BDL	BC
hioromethane	NE	NE	NE.	NE	· NE	NE	NE_	NE_	NE		00392 - 0.00513	BDL.	BDL	BDL	BOL	BDL	BOL	BDL	-B0
1-Dichloroethane	7800	1300	23	110	200000	1700	200,000	130	2.3	110	00392 - 0.00513	BOL	BDL	BDL	BDL	BDL	BDL	BDL	BD
2-Dichloroethane	7	0.4	0.02	0.1	63	0.7	1,400	0.99	0.02	0.1	.00392 - 0.00513	BOL	BOL	BDL	BDL	BDL	BDL.	BDL	B6
1-Dichloroethene	700	1500	0.06	0.3	48000	1500	1,800	300	0.06	0.3	.00392 - 0.00513	BDL	BDL	BDL.	BDL	BDL	BOL.	BDL	BD
is-1/2-Dichloroethene	780	1200	0.4	1.1	20000	1280	20,000	1200	0.4	1.1	-00392 - 0:00513	BDL.	BDL	BDL	BOL	BDL	BDL	BDL	80
rans-1.2-Dichloroethene	1600	3100	0.7	3.4	41000	3100	41,000	3100	0.7	3.4		BDL	BOL	BDL	BOL	BOL	BOL	BOL	BC
2-Dichloropropage	9	15	0.03	0.15	84	23	1,800	0.5	0.03	0.15	.00392 - 0.00513	BDL.	BDL	BDL BDL	BDL	BDL	BDL	BDL	BD
.3-Dichloropropene (cis+trans)	6.4	1.1	0.004	0.02	57	2.1	1,200	0.39	0.004	0.02	0.00235 - 0.00308		BDL	BDL	BDL	BDL	BOL	BOL	80
thylbenzene	7800	400	13	19	200000	400	20,000	58	13	19	.00392 - 0.00513	:BOL	BOL	BDL	BDL	BDL	BDL	BOL	BE
Hexanone	NE	NE	NE	NE :	NE	NE	NE	NE	NE	NE_	0.00785 - 0.0103		BDL	BDL	BDL	BOL	0.00489	BDL	BC
lettrylene chloride	85	13	0.02	0.2	760	24	12,000	34	0.02	0.2	.60392 - 0.00513	BDL	BDL	BDL	BDL	BDL	BDL.	BOL	BC
Methyl-2-pentanone	NE	NE	NE.	NE .	NE	NE	NE	. NE	NE	NE	0.00785 - 0.0103	BDL.		BDL	BDL	BDL	BOL	BDL.	BE
tyrene	16000	1500	- 4	18 .	410000	1500	41,000	430	4	18	.00392 - 0.00513	BOL	BOL	BDL BDL	BDL	BDL	BDL.	BOL	BC
1,2,2-Tetrachioroethane	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	.00392 - 0.00513	BDL	BDL BDL	BDL	BDL	BOL	BDL	BOL	BE
etrachioropthene	12	11	0.06	0.3	110	20	2,400	28	0.06	0.3	.00392 - 0.00513	BDL_		BDL	BDL	BOL	BDL	BOL	BC
Okene	16000	650	12	29	410000	650	410,000	42	12	29	.00392 - 0.00513	BDL.	BOL		BDL	BDL BDL	BDL	BOL	BD
1.1-Trichioroethane	NE	1200	2	9.6	NE	1200	NE	1200	2	9.6	.00392 - 0.00513	BDL	BOL	BDL		BBL	BDL	BOL	BC
nchloroethene	58	5	0.06	0.3	520	8.9 z	1,200	12	0.06	0.3	.00392 - 0.00513	BDL	BDL	BDL	BDL i	BDL	BDL	BOL	BE
	NE.	NE.	NE	NE	NE	NE	NE	NE-	NE	NE .	.00392 - 0.00513	BOL	BOL	BDL	BDL	BDL.	BDL	BOL	BC
richlorofluoromethane	78000	1000	170	170	1000000	1600	200,000	10	170	170	0.00785 - 0.0103	BDL	BDL	BDL	BDL		BDL	BDL	BC
Inyl acetate	0.46	0.28	0.01	0.07	7.9	1.1	170	1.1	0.01	0.07	:00392 - 0.00513	BDL	BDL	BDL	BDL.	BDL	BDL	BDL BDL	BC
inyl chloride otal Xvienes	160000	320	150	150	1000000	320	410,000	320	150	150	0.00785 - 0.0103	BDL	BDL	BDL.	BDL.	BDL	DUL	J OUL	<u> </u>

Notes:
Results in mg/kg (ppm)
a) 35 III. Admin. Code Part 742 (Tiered Approach to Corrective Action Objectives), Appendix B
NA - Not Analyzed
NE - Not Established
BDL - Below Detection Limit

Values in Boldface Exceed Tier 1 Residential Soil Remediation Objective
value exceeds Tier I Industrial/ Commercial Soil Remediation Objective.

Table 3-4 Summary of Soil Quality Test Results Former Morey Property Phase II ESA Downers Grove, Illinois Page 2 of 2

	Residentia	I Tier I Soil I	Remediation	Objectives *	Indu	strial/ Comn			diation Object	tives *				·				
			Migration to	Groundwater	Industrial (	Commercial	Construct	tion Worker	Migration to	Groundwater								
	100 (4)			1.0 (2.00)	ESS EST		14 1 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				Laboratory Reporting	SB-04	SB-04	SB-05	SB-05	SB-05	SB-06	SB-06
Parameter	Ingestion	Inhalation	Class I	Class II	Ingestion	Inhalation	Ingestion	Inhalation	Class I	Class II	Limit	18-20	38-40	5-7'	35-37	38-40	18-20	38-40
Soll pH- Method 9045C				-														
-u	NE	NE	NE	NE.	NE	NE	NE	NE	NE	NE		8.03	NA_	NA NA	NA NA	NA .	NA_	NA NA
Velatile Organic Compounds (		thod 5035/	8260B															
	7.800	100.000	16	16	200.000	100,000	200,000	100,000	16	46	.0196 - 0.0257	0.0485	BDL	BDL	BDL	BDL	BDL	BDL
Acetone	12	0.8	0.03	0.17	100	2	2.300	2	0.03	0.17	.00392 - 0.00513	BDL	"BDL	BDL	BDL	BDL	BDL	BDL
Benzene Bromodichloromethane	10	3.000	0.6	0.6	92	3.000	2.000	3.000	0.6	0.6	.00392 - 0.00513	BDL	BDL	BOL	BDL.	BDL	BDL	BDL
Bromodorm	81	53	0.8	0.8	720	100	16,000	140	0.8	8.0	.00392 - 0.00513	BDL.	BOL	BDL	BOL	BDL	BDL	BDL
Bromoiomi Bromomethane	NE NE	NE.	NE.	NE.	NE	NE	NE	NE	NE	:NE	.00392 - 0.00513	BDL	BDL	BDL	BDL	BDL	BDL	BDL
2-Butanone	NF NF	NE	NE NE	NE NE	NE	NE	NE	NE	NE	NE	0.00785 - 0.0103	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Zarbon Disulfide	7.800	720	32	160	200,000	720	20,000	9.0	32	160	.00392 - 0.00513	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Carbon Tetrachloride	5	0.3	0.07	0.33	44	0.64	410	0.9	0.07	0.33	.00392 - 0.00513	BDL	BDL	BDL	BDL	BDL	BDL	
Chlorobenzene	1,600	130	1	6.5	41.000	1,300	41.000	1,300	1	6.5	.00392 - 0.00513	BDL	BDL	BDL_	BDL	BDL	BDL	BDL
Chlorodibromomethane	1,600	1.300	0.4	6.4	41.000	1.300	41,000	1,300	0.4	0.4	.00392 - 0.00513	BDL	BOL	BOL	BOL	BDL	BDL	BDL
Chloroethane	NE.	NE	NE	NE	NE	NE	NE	NE	NE	NE	.00392 - 0.00513	BDL	BOL	BOL	BDL	BDL	BOL	
Chloroform	100	0.3	0.6	2.9	940	0.54	2.000	0.76	0.6	2.9	.00392 - 0.00513	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chloromethane	NE	NE NE	NE	NE	NE	NE	NE	NE	NE	NE	.00392 - 0.00513	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1.1-Dichloroethane	7800	1300	23	110	200000	1700	200,000	130	2.3	110	.00392 - 0.00513	BDL	BDL	BDL	BDL	-BOL	BDL	BOL
1,1-Dichloroethane	7	0.4	0.02	0.1	63	0.7	1.400	0.99	0.02	0.1	.00392 - 0.00513	BDL	BDL	BDL	BDL	BDL:	BDL	BDL
1.1-Dichloroethene	700	1500	0.06	0.3	18000	1500	1.800	300.	0.06	0.3	.00392 - 0.00513	BDL	BDL	BDL	BOL	*BDL	BDL	BDL BDL
ris-1:2-Dichloroethene	780	1200	0.4	1.1	20000	1200	20.000	1200	0.4	1.1	.00392 - 0.00513	BDL	BDL	BDL	BOL	BDL -	BDL.	BDL
rans-1,2-Dichloroethene	1600	3100	0.7	3.4	41000	3100	41.000	3100	0.7	3.4	.00392 - 0.00513	BDL	BDL.	BDL	BDL	BDL	BDL	BDL
12-Dichlorogoane	9	15	0.03	0.15	84	:23	1.800	0.5	0.03	0.15	.00392 - 0.00513	BDL	BOL	BDL	BOL	BDL.	BDL	BDL
1.3-Dichloropropene (cis+trans)	6.4	1.1	0.004	0.02	57	2.1	1,200	.0.39	0.004	0:02	0.00235 - 0.00308	BDL	-BDL	BDL	#BDL	BDL	BDL	BDL
Ethyfoenzene	7800	400	13	19	209000	400	20,000	58	13	19	.00392 - 0.00513	BDL	BOL	BDL	8DL	BOL	BOL	BDL
2-Hexanone	NE	NE NE	NE	NE	NE	NE	NE	NE	·NE	NE:	0.00785 - 0.0103	BDL	BOL	BOL	BDL	BDL	BDL	BOL
Methylene chloride	85	13	0.02	0.2	760	24	12,000	34	0.02	0.2	.00392 - 0.00513	0.00652	BOL	BDL	BDL	BDL	BDL BDL	BDL.
4-Methyl-2-pentanone	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	0.00785 - 0.0103	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Styrene	16000	1500	4	18	410000	1500	41,000	430	4	18	.00392 - 0.00513	BDL	BOL	BDL	BDL	BDL	BDL	BDL
1.1.2.2-Tetrachloroethane	NE	NE	NE	NE	NE.	NE	NE	NE	NE	NE	.00392 - 0.00513	BDL	BOL	BDL	BDL	BDL	BOL	BDL
etrachiomethene	12	11	0.06	0.3	110	20	2,400	28	0.06	0.3	.00392 - 0.00513	BDL	BOL	(10.3)	BDL	BOL	BDL	BDL
Tokene	16000	650	12.	29	410000	650	410,000	42 .	12	29	.00392 - 0.00513	BDL	BOL	BOL	BOL	BDL	BDL	BDL
I.1.1-Trictiloroethane	NE	1200	2	9.6	NE	1200	NE	1200	2	9.6	.00392 - 0.00513	BDL	· BDL	BDL	BDL.	BOL	BDL	BDL
richioroethene	58	5	0.06	0.3	520	8.9	1,200	12	0.06	0.3	.00392 - 0.00513	BDL	BDL	BDL	BDL	BOL	BDL	BOL
richiarofluoramethane	NE	NE	NE.	NE	NE ·	NE	NE	NE	NE	NE:	.00392 - 0.00513	BDL	BOL	BOL	BDL	BDL	BDL	BOL
/inyl acetale	78000	1000	170	170	1000000	1600	200,000	10	170	170	0.00785 - 0.0103	BDL	BDL	BDL.	BDL	BDL	BDL	BOL
/invi chloride	0.46	0.28	0.01	0.07	7.9	1.1	170	1.1	0.01	0.07	:00392 - 0.00513	BDL	BDL	BDL	BDL.	BDL	BDL	BDL
otal Xylenes	160000	320	150	150	1000000	320	410,000	320	150	, 150	0.00785 - 0.0103	BOL	BDL	BDL	BDL	L BUL	I BUL	4). OUL

Notes:
Results in mg/kg (ppm)
a) 35 M. Admin. Code Part 742 (Tiered Approach to Corrective Action Objectives), Appendix B
NA - Not Analyzed
NE - Not Established
BDL - Below Detection Limit

Values in Boldface Exceed Tier 1 Residential Soil Remediation value exceeds Tier I Industrial/ Commercial Soil Re

### Table 3-1 **Detected Soil Quality Parameters Former Morey Property** Phase II ESA Additional Subsurface Investigation **Downers Grove, Illinois** Page 1 of 2

	Residentia	esidential Tier I Soll Remediation Objectives				Industrial/ Commercial Tier I Soil Remediation Objectives *										· .
<b>\</b>			Migration to	Groundwater	Industrial/ C	Commercial	Constructi	on Worker	Migration to	Groundwater						
		Ì									SB-07 4' to 6'	SB-08 4' to 6'	SB-08D Dup. of SB-08		SB-10 1' to 3'	SB-11 1' to 3'
Parameter	Ingestion	Inhalation	Class I	Class II	ingestion	Inhalation	Ingestion	inhalation	Class I	Class II	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Volatile Organic Compounds	(VOCs) - Me	thod 5035/8	3260B								Tertier T					
Acetone	7,800	100,000	16	16	200,000	100,000	200,000	100,000	16	16	BDL	BDL	BDL	BDL	BDL	BDL
Methylene chloride	85	13	0.02	0,2	760	24	12,000	34	0.02	0.2	0.015	BDL	BDL	BDL	BDL	BDL
Tetrachloroethene	12	11	0.06	0.3	110	20	2,400	28	0.06	0.3	BDL	0.13	0.19	BDL	0.0092	BDL
Toluene	16,000	650	12	29	410,000	650	410,000	42	12	29	0.0058	BDL	BDL	BDL	0,006	0.0069

Analysis by STAT Analysis Corporation (STAT). VOCs analyzed by Method 8260B. Results given in mg/kg (ppm). Values in Boldface Exceed Tier 1 Residential Soil Remediation Objective (Migration to Groundwater - Class I Groundwater Only)

Value exceeds Tier I Industrial/ Commercial Soil Remediation Objective (Migration to Groundwater - Class I Groundwater Only)

NT - Not Tested, NE - Not Established, BDL - Below Detection Limit

<sup>&</sup>lt;sup>a</sup> 35 III. Admin. Code Part 742 (Tiered Approach to Corrective Action Objectives), Appendix B

### Table 3-1 **Detected Soil Quality Parameters** Former Morey Property Phase II ESA Additional Subsurface Investigation Downers Grove, Illinois Page 2 of 2

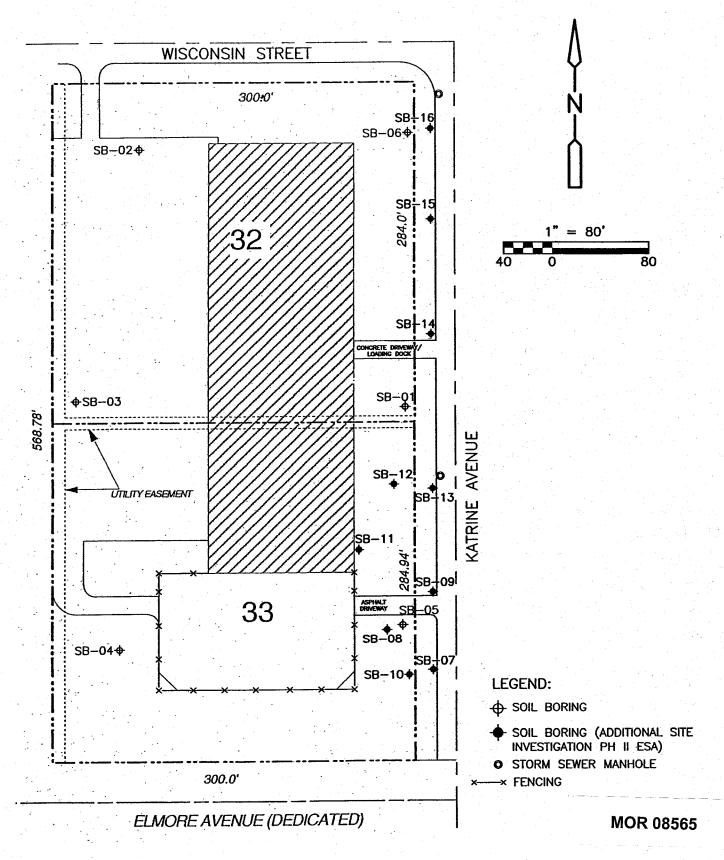
	Residential Tier I Soil Remediation Objectives							Soil Remed	lation Object	tives *					
	7 CONCOMINA	710.100		Groundwater						Groundwater	SB-12	SB-13	SB-14	SB-15	SB-16
Parameter	Ingestion	Inhalation	Class I	Class II	Ingestion	Inhalation	Ingestion	Inhalation	Class I	Class II	1' to 3' (mg/kg)				
Volatile Organic Compounds (\	/OCs) - Me	hod 5035/8	260B												
Acetone	7.800	100,000	16	16	200,000	100,000	200,000	100,000	16	16	0.047	0.037	0.043	0.052	0.045
Methylene chloride	85	13	0.02	0,2	760	24	12,000	34	0.02	0.2	BDL	BDL	BDL	BDL	BDL .
Tetrachloroethene	12	11	0.06	0.3	110	20	2,400	28	0.06	0.3	BDL	BDL	BDL	0.014	BDL
Toluene	16,000	650	12	29	410,000	650	410,000	42	12	29	BDL	BDL	BDL	BDL	BDL

Analysis by STAT Analysis Corporation (STAT). VOCs analyzed by Method 8260B. Results given in mg/kg (ppm). Values in Boldface Exceed Tier 1 Residential Soil Remediation Objective (Migration to Groundwater - Class I Groundwater Only)

Value exceeds Tier I Industrial/ Commercial Soil Remediation Objective (Migration to Groundwater - Class I Groundwater Only)

NT - Not Tested, NE - Not Established, BDL - Below Detection Limit

<sup>\* 35</sup> III. Admin. Code Part 742 (Tiered Approach to Corrective Action Objectives), Appendix B



NOTE: SITE BASE MAP FROM PIONEER ENGINEERING REPORT DATED JANUARY 2001.

Figure 2-1 SOIL BORING LOCATIONS MOREY CORPORATION PHASE II ESA ADDITIONAL SITE INVESTIGATION

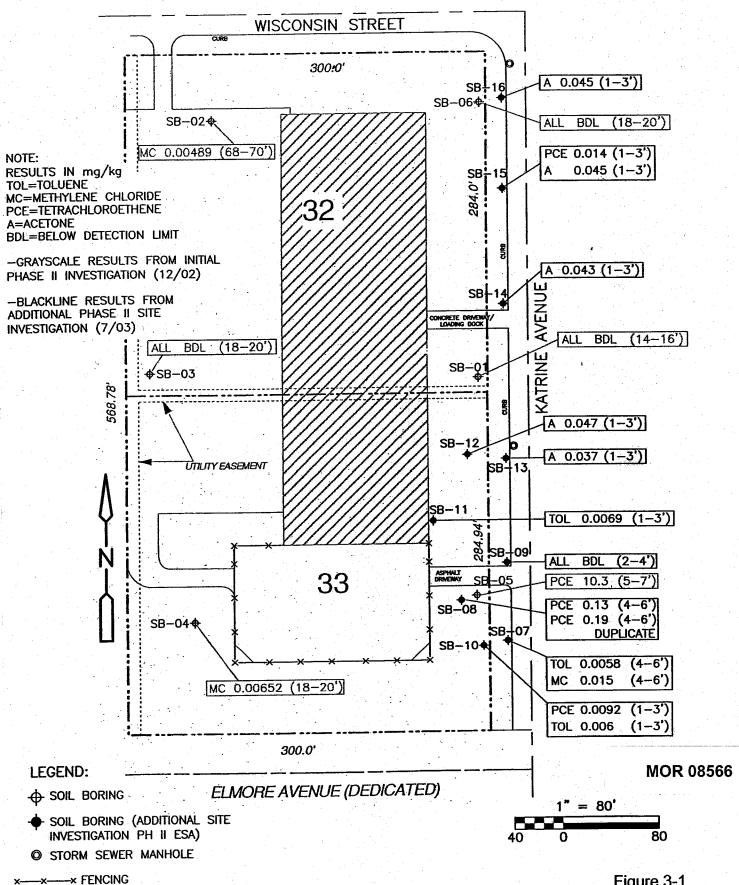


Figure 3-1
SOIL BORING ANALYTICAL RESULTS
MOREY CORPORATION PHASE II ESA
ADDITIONAL SITE INVESTIGATION

# CDM

## SUBJECT:

Enclosed are the final validation reports for the fractions listed below. Attachment 1 contains the qualified data reports.

# Project #

SDG#	<u>Fraction</u>
B212111 (GLA)	Volatiles
B212115 (GLA)	Volatiles
B212131 (GLA)	Volatiles
0307169 (STAT)	Volatiles

The data validation was performed under Level IV guidelines. The analyses were validated using the following documents, as applicable to each method:

- USEPA, Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update III, December 1996

Reviewer

Scott Kirchner

# CDM Data Validation Report

Project/Site Name:

Morey Phase II

**Collection Date:** 

December 05, 2002

**CDM Report Date:** 

September 19, 2005

Matrix:

Soil

Parameters:

Volatiles

Validation Level:

Level IV

Laboratory:

Great Lakes Analytical

Sample Delivery Group (SDG):

B212111

**Sample Identification** 

 Site ID
 Lab ID

 MP-SB-01-1416
 B212111-01

 MP-SB-01-5254
 B212111-02

 MP-SB-01-7678
 B212111-03

#### Introduction

This data review covers 3 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

Data qualifiers were added as appropriate to a copy of the data reports. These modified data reports are provided at the end of this report.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

The following are definitions of the data qualifiers:

- U Indicates the compound was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

# I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

#### II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

#### III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 15.0% for each individual compound and less than or equal to 30.0% for calibration check compounds (CCCs).

In the case where %RSD was greater than 15.0%, the laboratory used a calibration curve to evaluate the compound. All coefficients of determination () were greater than or equal to 0.990.

For the purpose of technical evaluation, all compounds were evaluated against the 30.0% (%RSD) and 0.05 relative response factor (RRF) National Functional Guideline criteria. All compounds were within the validation criteria with the following exceptions:

Date	Compound	%RSD	Associated Samples	Flag	RRF
11/5/02	Bromomethane	40.24	Ali	J (all detects)	
	Trichlorotrifluoromethane	37.78			
	Acetone	62.22			

Average relative response factors (RRF) for all volatile target compounds and system performance check compounds (SPCCs) were within method and validation criteria.

# IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs).

For the purpose of technical evaluation, all compounds were evaluated against the 25.0% (%D) and 0.05 RRF National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	RRF
12/09/02	Bromomethane	39.3	MP-SB-01-1416	J (all detects)	
	Trichlorotrifluoromethane	62.4	MP-SB-01-7678	UJ (all non-detects)	
	Acetone	64.5	·		
	Carbon disulfide	43.0			
	1,1,1-trichloroethane	27.7			
	Vinyl acetate	54.7			
	2-Butanone	73.1	·	R (2-butanon non-	0.014
,	4-methyl-2-pentanone	74.4		detects)	
	1,1,2-trichloroethane	27.4			
	2-hexanone	76.6			
	Chlorodibromomethane	25.5			
	Bromoform	38.8			
	1,1,2,2-tetrachloroethane	44.9			
12/10/02	Bromomethane	39.5	MP-SB-01-5254	J (all detects)	
·	Trichlorotrifluoromethane	88.1		UJ (all non-detects)	
	Acetone	63.8			
	Chloroethane	39.5			
	Carbon disulfide	34.0		•	
	1,1,1-Trichloroethane	41.5			
	Vinyl acetate	51.8	,		
	2-Butanone	67.3		R (2-butanon non-	0.017
	Carbon tetrachloride	32.7		detects)	
	Trichloroethene	37.8			
	4-methyl-2-pentanone	68.7			
	2-hexanone	72.1			
	Xylenes	30.8			
	Bromoform	26.7			
	1,1,2,2-tetrachloroethane	32.4			

## V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Analysis Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
BLK 2120162	12/09/02	NA	13	All

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
No			
Exceptions			

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were either not detected or were significantly greater (> 10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated field blanks with the following exceptions:

There were no field blanks associated with the samples contained in this SDG.

# VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

## VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

# VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits with the following exceptions:

LCSID	Date	Compound	%R	Associated Samples	Flag
2120162 BS1	12/9/02	Chlorodibromomethane 1,1,2-trichloroethane Trichlorofluoromethane	74.4 72.4 282	MP-SB-01-1416 MP-SB-01-7678	J (all detects) UJ (all non-detects)
2120162 BS2	12/9/02	Trichlorofluoromethane	346		

# IX. Regional Quality Assurance and Quality Control

Not applicable.

## X. Internal Standards

All internal standard areas and retention times were within QC limits for the reported results. All internal standards areas were below criteria for initial analysis of sample MP-SB-01-5254. The reanalysis of this sample had acceptable internal standard areas and was used for reporting

# XI. Target Compound Identifications

All target compound identifications were within validation criteria for samples for all samples.

## XII. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria for all samples.

# XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

# XIV. System Performance

The system performance was within validation criteria.

## XV. Overall Assessment of Data

Data flags have been applied to data reports and attached at the end of this report.

## XVI. Field Duplicates

No field duplicates were identified in this SDG.

# XVII. Additional Findings

During review of the raw data the following items were noted:

- 1. Some target and surrogate areas were manually integrated but the integration details were not included in the report. The laboratory was contacted and supplied some clarification that included integration details.
- 2. The surrogate control limits reported on a form titles QA/QC Report did not match the limits given on the data report forms. The laboratory was contacted as to which control limits the data were evaluated against. The laboratory responded that the criteria listed on the data report forms were used for results analysis and the ones on the QA/QC report were generated for instrumentation review only.

The laboratory responses were satisfactory and are attached to this report. No action was required on the data.

Data Validation Checklist, Worksheets And Supplemental Information

# **VALIDATION FINDINGS CHECKLIST**

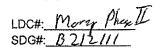
LDC#: Merry Plustof SDG#: RZ/Z///

Page 1 of 2 Reviewer: 5. kirchar

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
Technical holding times				
All technical holding times were met.	乂			
Cooler temperature criteria was met.	×			
II GC/MS Instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	Х			
Were all samples analyzed within the 12 hour clock criteria?	Х			
III Initial calibration		Ι	Γ	
Did the laboratory perform a 5 point calibration prior to sample analysis?	X			
Were all percent relative standard deviations (%RSD) and relative response factors (RFF) within method criteria for all CCCs and SPCCs?	X			
Was a curve fit used for evaluation? If yes, what was the acceptance criteria used?	Х			1210.99
Did the initial calibration meet the curve fit acceptance criteria?	X		_	
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) ≥ 0.05?		X		Ser Yeak Sheet
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	人			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	X			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?		X		See worksheet
V. Blanks				
Was a method blank associated with every sample in this SDG?	X			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	Х			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	乂			Siz Woodesheet
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	人			
If the percent recovery (%R) for one of more surrogates was out of QC limits, was a reanalysis performed to confirm				
samples with %R outside of criteria?	NO. 10 NO. 10 10 10 10 10 10 10 10 10 10 10 10 10		78000000000000000000000000000000000000	
VII. Matrix spike/matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in the SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.		人		Site Spaishe Soil Mosperson Not Analyzed  according ran log
Was a MS/MSD analyzed every 20 samples of each matrix?	X			according renlog

# **VALIDATION FINDINGS CHECKLIST**



Page Z of 2 Reviewer: S. Kirichan

Method: Volatiles (EPA SW 846 Method 8260B)

Wethou: Volatiles (EPA 3VV 646 Methou 6200b)			<u></u>	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			X	·
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	X			
Was an LCS analyzed per analytical batch?	X			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?		X		See Work Sheet
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			×	
Were the performance evaluation (PE) samples within the acceptance limits?	·	-	Х	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?		义		Ser work sheet
Were retention times within +/- 30 seconds of the associated calibration standard?	χ			
XI. Target:compound identification				
Were relative retention times (RRTs) within +/- 0.06 RRT units of the standard?	义		·	
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	X			
Were chromatogram peaks verified and accounted for?	X			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	×			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	Х			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?	Х			
Were relative intensities of the major ions within +/- 20% between the sample and the reference spectra?	L			
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?	X			
XIV. System performance				
System performance was found to be acceptable.	人			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	Х			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		Х		
Target compounds were detected in the field duplicates.			X	
XVII. Field blanks				
Field blanks were identified in this SDG.	乂			
Target compounds were detected in the field blanks.	,		X	
		L		

# Crosswalk - Worksheet ID vs. Compound Name

A   Dichlorodifluoromethane   76-71-8   SPCC (%RS)	Worksheet ID ऋः	Compound Name	CAS No.	System Performance
B				SPCC (%RSD)
C         VinyiChloride         75-01-4         CCC (RRF)           D         Bromomethane         74-83-9         CCC (RRF)           E         Chloroethane         75-00-3         F           F         Trichlorofluoromethane         75-00-3         CCC (RRF)           H         1,1,2-Trichloro-1,2,2-trifluoroethane         78-19-1         CCC (RRF)           H         1,1,2-Trichloro-1,2,2-trifluoroethane         78-19-1         CCC (RRF)           J         CarbonDisulfide         75-15-0         M           K         MethylAcetate         78-20-9         Trichloroethane           J         CarbonDisulfide         75-15-0         M           M         trans-1,2-Dichloroethane         156-60-5         Trichloroethane         Trichloroethane         156-60-5           N         tert-ButyMethylEther         1684-04-4         SPCC (%RSI)           P         cis-1,2-Dichloroethane         75-34-3         SPCC (%RSI)           P         cis-1,2-Dichloroethane         74-97-5         CCC (RRF)           R         Bromochloromethane         74-97-5         CCC (RRF)           T         1,1,1-Trichloroethane         110-82-7         Trichloroethane         110-92-7           V				
D			_ <del></del>	CCC (RRF)
E Chloroethane 75-00-3 F Trichlorofluoromethane 75-89-4 G 1,1-Dichloroethene 75-85-4 H 1,1,2-Trichloro-1,2,2-trifluoroethane 76-13-1 i Acetone 75-15-0 K MethylAcetate 75-20-9 L MethyleneChloride 75-15-0 N Itan-1,2-Dichloroethene 156-60-5 N Itan-1,2-Dichloroethene 156-60-5 N Itan-1,2-Dichloroethene 156-60-5 N Itan-1,2-Dichloroethene 156-50-2 Q 2-Butanone 78-93-3 R Bromochloromethane 74-97-5 S Chloroform 57-66-3 CCC (RRF) T 1,1,1-Trichloroethane 110-82-7 V CarbonTetrachloride 56-23-5 W Benzene 17-43-2 X 1,2-Dichloroethane 107-08-2 Y Trichloroethane 107-08-2 Y Trichloroethane 108-87-2 AA 1,2-Dichlorophane 108-87-2 CC cis-1,3-Dichlorophane 108-87-2 CC cis-1,3-Dichlorophane 108-88-3 BB ∀ Bromodichloromethane 78-87-5 CCC (RRF) T 1,0-Trichloroethane 107-08-2 T 1,1-Trichloroethane 107-08-2 T Trichloroethane 108-88-2 CCC (RRF) T Trichloroethane 108-88-3 CCC (RRF) T Trichloroethane 108-88-3 CCC (RRF) CC cis-1,3-Dichloropropene 10081-01-5 CC cis-1,3-Dichloropropene 10081-01-6 CC cis-1,3-Dichloropropene 108-88-3 CCC (RRF) FF trans-1,3-Dichloropropene 108-88-3 CCC (RRF) HH			~~~~ <del>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</del>	
F				
G				
H			75-35-4	CCC (RRF)
Acetone	The same of the sa	1 -		
K         MethylAcetate         79-20-9           L         MethyleneChloride         75-09-2           M         trans-1,2-Dichloroethene         156-60-5           N         tert-ButylMethylEther         1684-04-4           O         1,1-Dichloroethane         76-34-3         SPCC (%RS)           P         cls-1,2-Dichloroethene         156-59-2         Q           Q         2-Butanone         78-93-3         R           R         Bromochloromethane         74-97-5         S           S         Chloroform         67-68-3         CCC (RRF)           T         1,1,1-Trichloroethane         71-55-6         U           U         Cyclohexane         110-82-7         V           V         CarbonTetrachloride         56-23-5         B           W         Benzene         71-43-2         X           X         1,2-Dichloroethane         107-06-2         Y           Y         Trichloroethane         79-01-6         Z           AA         1,2-Dichloropropane         78-87-5         CCC (RRF)           BB         ✓ Bromodichloromethane         75-27-4         CCC (cis-1,3-Dichlorobenzene         10061-01-5           DD         4-Met			67-64-1	
L         MethyleneChloride         75-09-2           M         trans-1,2-Dichloroethene         155-80-5           N         tert-ButylMethylEther         1634-04-4           O         1,1-Dichloroethane         75-34-3         SPCC (%RS)           P         cis-1,2-Dichloroethene         156-59-2           Q         2-Butanone         78-93-3         R           R         Bromochloromethane         74-97-5         CCC (RRF)           S         Chloroform         67-66-3         CCC (RRF)           T         1,1,1-Trichloroethane         71-55-6         CCC (RRF)           U         Cyclohexane         110-82-7         V           V         CarbonTetrachloride         56-23-5         W           W         Benzene         71-43-2         X         1,2-Dichloroethane         107-06-2           Y         Trichloroethane         79-01-8         Z         CCC (RRF)           Z         Methylocyclohexane         108-87-2         AA         1,2-Dichloropropane         78-87-5         CCC (RRF)           BB         Bromodichloromethane         75-27-4         CCC (RRF)         CCC (sis-1,3-Dichloropropane         1008-10-15         DCD         DD         4-Methyl-2-pentanone <td>J</td> <td>CarbonDisulfide</td> <td>75-15-0</td> <td></td>	J	CarbonDisulfide	75-15-0	
M         trans-1,2-Dichloroethene         156-60-5           N         tert-ButyMethylEther         1634-04-4           O         1,1-Dichloroethane         75-34-3         SPCC (%RS)           P         cis-1,2-Dichloroethene         156-59-2           Q         2-Butanone         78-93-3           R         Bromochloromethane         74-97-5           S         Chloroform         67-68-3         CCC (RRF)           T         1,1,1-Trichloroethane         71-55-6           U         Cyclohexane         110-82-7           V         CarbonTetrachloride         56-23-5           W         Benzene         71-43-2           X         1,2-Dichloroethane         107-06-2           Y         Trichloroethene         79-01-8           Z         Methylocylohexane         18-87-2           AA         1,2-Dichloropropane         78-87-5         CCC (RRF)           BB         Bromodichloromethane         75-27-4         CCC           CC         cis-1,3-Dichloropropene         10061-01-5         10061-01-5           DD         4-Methyl-2-pentanone         10061-02-6         10061-02-6           GG         1,1,2-Trichloroethane         79-00-5	K	MethylAcetate	79-20-9	
N         tert-ButylMethylEther         1634-04-4         SPCC (%RS)           O         1,1-Dichloroethane         75-34-3         SPCC (%RS)           P         cis-1,2-Dichloroethene         156-59-2         Q           Q         2-Butanone         78-93-3         R           R         Bromochloromethane         74-97-5         S           S         Chloroform         67-86-3         CCC (RRF)           T         1,1,1-Trichloroethane         71-55-6         CCC (RRF)           T         1,1,1-Trichloroethane         110-82-7         V           V         CarbonTetrachloride         56-23-5         CCC (RRF)           W         Benzene         71-43-2         X           X         1,2-Dichloroethane         107-08-2         Y           Y         Trichloroethane         79-01-6         Z           X         1,2-Dichloropropane         78-87-5         CCC (RRF)           BB         Bromodichloromethane         75-27-4         CCC (RRF)           CC         cis-1,3-Dichloropropane         10081-01-5         DDD 4-Methyl-2-pentanone         10081-01-5           EE         Toluene         108-88-3         CCC (RRF)           FF         tran	L	MethyleneChloride	75-09-2	
O         1,1-Dichloroethane         75-34-3         SPCC (%RS)           P         cis-1,2-Dichloroethene         156-59-2         Q           Q         2-Butanone         78-93-3         R           R         Bromochloromethane         74-97-5         S           S         Chloroform         67-66-3         CCC (RRF)           T         1,1,1-Trichloroethane         71-55-6         U           U         Cyclohexane         110-82-7         V           V         CarbonTetrachloride         56-23-5         V           W         Benzene         71-43-2         X           X         1,2-Dichloropethane         107-06-2         Y           Y         Trichloroethane         79-01-6         Z           A         1,2-Dichloropropane         78-87-5         CCC (RRF)           BB         ✓ Bromodichloromethane         75-27-4         CCC (S-1,3-Dichloropropane         10061-01-5           DD         4-Methyl-2-pentanone         108-8-3         CCC (RRF)           FF         trans-1,3-Dichloropthane         79-00-5           FF         trans-1,3-Dichloropthane         79-00-5           HH         Tetrachloroethane         106-93-4	M	trans-1,2-Dichloroethene	156-60-5	
P         cis-1,2-Dichloroethene         156-59-2           Q         2-Butanone         78-93-3           R         Bromochloromethane         74-97-5           S         Chloroform         67-68-3         CCC (RRF)           T         1,1,1-Trichloroethane         71-55-6           U         Cyclohexane         110-82-7           V         CarbonTetrachloride         56-23-5           W         Benzene         71-43-2           X         1,2-Dichloroethane         107-06-2           Y         Trichloroethene         79-01-6           Z         Methylcyclohexane         108-87-2           AA         1,2-Dichloropropane         78-87-5         CCC (RRF)           BB         Bromodichloromethane         75-27-4           CC         cis-1,3-Dichloropropene         10061-01-5           DD         4-Methyl-2-pentanone         108-83-3         CCC (RRF)           FF         trans-1,3-Dichloropropene         10061-02-6         G           GG         1,1,2-Trichloroethane         79-00-6         F           HH         Tetrachloroethane         79-00-6         F           JJ         Dibromochloromethane         104-93-4         L		tert-ButylMethylEther	1634-04-4	
Q         2-Butanone         78-93-3           R         Bromochloromethane         74-97-5           S         Chloroform         67-66-3         CCC (RRF)           T         1,1,1-Trichloroethane         71-55-6         U           U         Cyclohexane         110-82-7         V           V         CarbonTetrachloride         56-23-5         V           W         Benzene         71-43-2         X           X         1,2-Dichloroethane         107-06-2         Y           Y         Trichloroethane         198-01-6         Z           A         1,2-Dichloropropane         78-87-5         CCC (RRF)           BB         ✓ Bromodichloromethane         75-27-4         CCC (CC (IRF)           CC         cis-1,3-Dichloropropene         10081-01-5         DD (IRC)           DD         4-Methyl-2-pentanone         108-88-3         CCC (RRF)           FF         trans-1,3-Dichloropropene         10061-02-6         GR           GG         1,1,2-Trichloroethane         79-00-5         HA           HH         ✓ Tetrachloroethane         127-18-4         II           II         2-Hexanone         591-78-6         John (IRC) <t< td=""><td></td><td>1,1-Dichloroethane</td><td>75-34-3</td><td>SPCC (%RSD)</td></t<>		1,1-Dichloroethane	75-34-3	SPCC (%RSD)
R         Bromochloromethane         74-97-5           S         Chloroform         67-68-3         CCC (RRF)           T         1,1,1-Trichloroethane         71-55-6         CCC (RRF)           U         Cyclohexane         110-82-7         V           V         CarbonTetrachloride         55-23-5         W           W         Benzene         71-43-2         X           X         1,2-Dichloroethane         107-06-2         Y           Y         Trichloroethane         79-01-6         2           Z         Methylcyclohexane         108-87-2         A           AA         1,2-Dichloropropane         78-87-5         CCC (RRF)           BB         Bromodichloromethane         75-27-4         CCC (cis-1,3-Dichloropropene         10061-01-5           DD         4-Methyl-2-pentanone         108-81-0-1         EE         Toluene         108-88-3         CCC (RRF)           FF         trans-1,3-Dichloropropene         10061-02-6         GG         1,1,2-Trichloroethane         79-00-5         HH         ✓ Tetrachloroethane         79-00-5         HH         ✓ Tetrachloroethane         106-48-3         US-78-6         US-78-6         US-78-6         US-78-6         US-78-6         US-78-6		cis-1,2-Dichloroethene	156-59-2	
S         Chloroform         67-86-3         CCC (RRF)           T         1,1,1-Trichloroethane         71-55-6           U         Cyclohexane         110-82-7           V         CarbonTetrachloride         56-23-5           W         Benzene         71-43-2           X         1,2-Dichloroethane         107-06-2           Y         Trichloroethene         79-01-6           Z         Methylcyclohexane         108-87-2           AA         1,2-Dichloropropane         78-87-5           BB         Bromodichloromethane         75-27-4           CC         cis-1,3-Dichloropropene         10081-01-5           DD         4-Methyl-2-pentanone         108-10-1           EE         Toluene         108-88-3         CCC (RRF)           FF         trans-1,3-Dichloropropene         100-61-02-6           GG         1,1,2-Trichloroethane         79-00-5           HH         Tetrachloroethane         79-00-5           JJ         Dibromochloromethane         127-18-4           II         2-Hexanone         591-78-6           JJ         Dibromochloromethane         106-93-4           KK         1,2-Dibromochane         106-90-7      <		4	78-93-3	
T 1,1,1-Trichloroethane 71-55-6  U Cyclohexane 110-82-7  V CarbonTetrachloride 56-23-5  W Benzene 71-43-2  X 1,2-Dichloroethane 107-06-2  Y Trichloroethene 79-01-6  Z Methylcyclohexane 108-87-2  AA 1,2-Dichloropropane 78-87-5  CCC (is-1,3-Dichloropropene 10061-01-5  DD 4-Methyl-2-pentanone 108-10-1  EE Toluene 108-88-3  CCC (RRF)  FF trans-1,3-Dichloropropene 10061-02-6  GG 1,1,2-Trichloroethane 79-00-5  HH   Tetrachloroethene 122-18-4  II 2-Hexanone 591-78-6  JJ Dibromochloromethane 106-93-4  LL  Chlorobenzene 109-90-7  KK  ✓ 1,2-Dibromoethane 100-41-4  KK  ✓ 1,2-Dibromoethane 100-41-4  CCC (RRF)  MM  Ethylbenzene 100-41-4  CCC (RRF)  NN  Xylenes(total) 1330-20-7  OO  ✓ Styrene 100-42-5  PP  Bromoform 75-25-2  SPCC (%RSI  SS 1,3-Dichlorobenzene 98-82-8  RR 1,1,2,2-Tetrachloroethane 79-34-5  SPCC (%RSI  TT 1,4-Dichlorobenzene 98-60-1  UU 1,2-Dichlorobenzene 108-80-1  UU 1,2-Dichlorobenzene 98-60-1  VV 1,2-Dibromo-3-chloropropane 96-12-8  WW 1,2,4-Trichlorobenzene 120-82-1  XX 1,2,4-Trichlorobenzene 87-61-6  YY  ZZ  AAAA				
U         Cyclohexane         110-82-7           V         CarbonTetrachloride         56-23-5           W         Benzene         71-43-2           X         1,2-Dichloroethane         107-06-2           Y         Trichloroethene         79-01-6           Z         Methylcyclohexane         108-87-2           AA         1,2-Dichloropropane         78-87-5         CCC (RRF)           BB         Bromodichloromethane         75-27-4         CCC (is-1,3-Dichloropropene         10061-01-5           DD         4-Methyl-2-pentanone         108-10-1         EE           EE         Toluene         108-88-3         CCC (RRF)           FF         trans-1,3-Dichloropropene         10061-02-6         GG           GG         1,1,2-Trichloroethane         79-00-5         HH         ✓ Tetrachloroethene         127-18-4         II           II         2-Hexanone         591-78-6         JJ         JDibromochloromethane         124-48-1           KK         ✓ 1,2-Dibromoethane         106-93-4         LL         Chlorobenzene         108-90-7         SPCC (%RSI           MM         ✓ Ethylbenzene         100-41-4         CCC (RRF)           NN         ✓ Xylenes(total)         1330	S		67-66-3	CCC (RRF)
V         CarbonTetrachloride         56-23-5           W         Benzene         71-43-2           X         1,2-Dichloroethane         107-06-2           Y         Trichloroethene         79-01-6           Z         Methylcyclohexane         108-87-2           AA         1,2-Dichloropropane         78-87-5         CCC (RRF)           BB         Bromodichloromethane         75-27-4         CCC (is-1,3-Dichloropropene         10061-01-5           DD         4-Methyl-2-pentanone         108-10-1         EE           EE         Toluene         108-88-3         CCC (RRF)           FF         trans-1,3-Dichloropropene         10061-02-6         GG           GG         1,1,2-Trichloroethane         79-00-5         HH           HH         Tetrachloroethene         127-18-4         II           J         2-Hexanone         591-78-6         J           JJ         Dibromochloromethane         124-48-1         KK         ✓ 1,2-Dibromochane         108-93-4           LL         Chlorobenzene         108-93-4         LL         CCC (%RSI           NM         Ethylbenzene         100-41-4         CCC (%RSI           NN         Xylenes(total)         1330-20-7<	T	1,1,1-Trichloroethane	71-55-6	
W         Benzene         71-43-2           X         1,2-Dichloroethane         107-08-2           Y         Trichloroethene         79-01-6           Z         Methylcyclohexane         108-87-2           AA         1,2-Dichloropropane         78-87-5         CCC (RRF)           BB         ✓ Bromodichloromethane         75-27-4         CC         cis-1,3-Dichloropropene         10061-01-5           DD         4-Methyl-2-pentanone         108-88-3         CCC (RRF)           DD         4-Methyl-2-pentanone         108-88-3         CCC (RRF)           EE         Toluene         108-88-3         CCC (RRF)           FF         trans-1,3-Dichloropropene         10061-02-6         GG           GG         1,1,2-Trichloroethane         79-00-5         HH         Tetrachloroethane         79-00-5           HH         ✓ Tetrachloroethane         127-18-4         II         2-Hexanone         591-78-6         JJ           JJ         Dibromochloromethane         124-48-1         KK         / 1,2-Dibromochloromethane         108-93-4         LL           KK         / 1,2-Dibromochloromethane         108-90-7         SPCC (%RSI           MM         Ethylberzene         100-41-4         CCC (R			110-82-7	
X       1,2-Dichloroethane       107-06-2         Y       Trichloroethene       79-01-6         Z       Methylcyclohexane       108-87-2         AA       1,2-Dichloropropane       78-87-5       CCC (RRF)         BB       ✓ Bromodichloromethane       75-27-4       CCC (cis-1,3-Dichloropropene       10061-01-5         DD       4-Methyl-2-pentanone       108-10-1       EE         Toluene       108-88-3       CCC (RRF)         FF       trans-1,3-Dichloropropene       10061-02-6         GG       1,1,2-Trichloroethane       79-00-5         HH       ✓ Tetrachloroethane       127-18-4         II       2-Hexanone       591-78-6         JJ       Dibromochloromethane       124-48-1         KK       ✓ 1,2-Dibromoethane       108-93-4         LL       ✓ Chlorobenzene       108-90-7       SPCC (%RSI         MM       ✓ Ethylbenzene       100-41-4       CCC (RRF)         NN       ✓ Xylenes(total)       1330-20-7       OO       ✓ Styrene       100-42-5         PP       Ø Bromoform       75-25-2       SPCC (%RSI         QQ       Isopropylbenzene       541-73-1       SPCC (%RSI         SS       1,3-Dichlorobenzene </td <td>V</td> <td>CarbonTetrachloride</td> <td>56-23-5</td> <td></td>	V	CarbonTetrachloride	56-23-5	
Y         Trichloroethene         79-01-6           Z         Methylcyclohexane         108-87-2           AA         1,2-Dichloropropane         78-87-5         CCC (RRF)           BB         ✓ Bromodichloromethane         75-27-4         CCC (cis-1,3-Dichloropropene         10061-01-5           DD         4-Methyl-2-pentanone         108-81-0-1         Telloune           EE         Toluene         108-88-3         CCC (RRF)           FF         trans-1,3-Dichloropropene         10061-02-6         GG           GG         1,1,2-Trichloroethane         79-00-5         HH           HH         ✓ Tetrachloroethene         127-18-4         II           1         2-Hexanone         591-78-6         JJ           JJ         Dibromochloromethane         124-48-1         KK         ✓ 1,2-Dibromoethane         108-93-4           KK         ✓ 1,2-Dibromoethane         108-90-7         SPCC (%RSI           MM         ✓ Ethylbenzene         100-41-4         CCC (RRF)           NN         ✓ Xylenes(total)         1330-20-7         OC           OO         ✓ Styrene         100-42-5         SPCC (%RSI           QQ         Isopropylbenzene         98-82-8         SPCC (%RSI	W	Benzene	71-43-2	
Z       Methylcyclohexane       108-87-2         AA       1,2-Dichloropropane       78-87-5       CCC (RRF)         BB       ✓ Bromodichloromethane       75-27-4       CCC (cis-1,3-Dichloropropene       10061-01-5         DD       4-Methyl-2-pentanone       108-10-1       EE         EE       Toluene       108-88-3       CCC (RRF)         FF       trans-1,3-Dichloropropene       10061-02-6       FR         GG       1,1,2-Trichloroethane       79-00-5       FR         HH       ✓ Tetrachloroethane       127-18-4       II         II       2-Hexanone       591-78-6       JJ         JJ       Dibromochloromethane       124-48-1       KK         KK       ✓ 1,2-Dibromoethane       108-93-4       LL         LL       ✓ Chlorobenzene       108-90-7       SPCC (%RSI         MM       ✓ Ethylbenzene       100-41-4       CCC (RRF)         NN       ✓ Xylenes(total)       1330-20-7       OO       Syrrene       100-42-5         PP       Ø Bromoform       75-25-2       SPCC (%RSI         QQ       Isopropylbenzene       98-82-8       SPCC (%RSI         SS       1,3-Dichlorobenzene       541-73-1       TT       1,4-D	Χ	1,2-Dichloroethane	107-06-2	
AA 1,2-Dichloropropane 78-87-5 CCC (RRF)  BB		Trichloroethene	79-01-6	
BB	Z	Methylcyclohexane	108-87-2	
CC         cis-1,3-Dichloropropene         10061-01-5           DD         4-Methyl-2-pentanone         108-10-1           EE         Toluene         108-88-3         CCC (RRF)           FF         trans-1,3-Dichloropropene         10061-02-6         CCC (RRF)           GG         1,1,2-Trichloroethane         79-00-5         127-18-4           HH         ✓ Tetrachloroethene         127-18-4         1           II         2-Hexanone         591-78-6         591-78-6           JJ         Dibromochloromethane         104-48-1         KK           KK         1,2-Dibromoethane         108-93-4         LL           LL         Chlorobenzene         108-90-7         SPCC (%RSI           MM         Ethylbenzene         109-93-4         CCC (RRF)           NN         Xylenes(total)         1330-20-7         SPCC (%RSI           NN         Xylenes(total)         1330-20-7         DO (RRSI           OO         ✓ Styrene         100-42-5         SPCC (%RSI           QQ         Isopropylbenzene         98-82-8         SPCC (%RSI           SS         1,3-Dichlorobenzene         541-73-1         TT           TT         1,4-Dichlorobenzene         95-50-1 <td< td=""><td>AA</td><td>1,2-Dichloropropane</td><td>78-87-5</td><td>CCC (RRF)</td></td<>	AA	1,2-Dichloropropane	78-87-5	CCC (RRF)
DD         4-Methyl-2-pentanone         108-10-1           EE         Toluene         108-88-3         CCC (RRF)           FF         trans-1,3-Dichloropropene         10061-02-6           GG         1,1,2-Trichloroethane         79-00-5           HH         Tetrachloroethene         127-18-4           II         2-Hexanone         591-78-6           JJ         Dibromochloromethane         108-93-4           KK         1,2-Dibromoethane         108-93-4           LL         Chlorobenzene         108-90-7         SPCC (%RSI           MM         Ethylbenzene         100-41-4         CCC (RRF)           NN         Xylenes(total)         1330-20-7         OC           OO         Styrene         100-42-5         SPCC (%RSI           QQ         Isopropylbenzene         98-82-8         SPCC (%RSI           QQ         Isopropylbenzene         98-82-8         SPCC (%RSI           SS         1,3-Dichlorobenzene         541-73-1         TT           TT         1,4-Dichlorobenzene         108-46-7         UU           UU         1,2-Dichlorobenzene         96-12-8           WW         1,2,4-Trichlorobenzene         120-82-1           XX	BB ✓	Bromodichloromethane	75-27-4	
EE         Toluene         108-88-3         CCC (RRF)           FF         trans-1,3-Dichloropropene         10061-02-6           GG         1,1,2-Trichloroethane         79-00-5           HH         / Tetrachloroethene         127-18-4           II         2-Hexanone         591-78-6           JJ         Dibromochloromethane         124-48-1           KK         / 1,2-Dibromoethane         106-93-4           LL         Chlorobenzene         108-90-7         SPCC (%RSI           MM         Ethylbenzene         100-41-4         CCC (RRF)           NN         Xylenes(total)         1330-20-7         OC           OO         Styrene         100-42-5         PC           PP         / Bromoform         75-25-2         SPCC (%RSI           QQ         Isopropylbenzene         98-82-8         SPCC (%RSI           SS         1,3-Dichlorobenzene         541-73-1         TT         1,4-Dichlorobenzene         541-73-1           TT         1,4-Dichlorobenzene         106-46-7         UU         1,2-Dichlorobenzene         95-50-1           VV         1,2-Dibromo-3-chloropropane         96-12-8         WW         1,2,4-Trichlorobenzene         120-82-1           XX	CC	cis-1,3-Dichloropropene	10061-01-5	
FF       trans-1,3-Dichloropropene       10061-02-6         GG       1,1,2-Trichloroethane       79-00-5         HH       / Tetrachloroethene       127-18-4         II       2-Hexanone       591-78-6         JJ       Dibromochloromethane       124-48-1         KK       1,2-Dibromoethane       106-93-4         LL       / Chlorobenzene       108-90-7       SPCC (%RSI         MM       / Ethylbenzene       100-41-4       CCC (RRF)         NN       / Xylenes(total)       1330-20-7       OO         OO       / Styrene       100-42-5       PC         PP       / Bromoform       75-25-2       SPCC (%RSI         QQ       Isopropylbenzene       98-82-8       SPCC (%RSI         SS       1,1,2,2-Tetrachloroethane       79-34-5       SPCC (%RSI         SS       1,3-Dichlorobenzene       541-73-1       TT         TT       1,4-Dichlorobenzene       106-46-7       UU         UU       1,2-Dichlorobenzene       95-50-1       VV         VV       1,2-Dibromo-3-chloropropane       96-12-8         WW       1,2,4-Trichlorobenzene       87-61-6         YY       2Z         AAA <td>DD</td> <td>4-Methyl-2-pentanone</td> <td>108-10-1</td> <td></td>	DD	4-Methyl-2-pentanone	108-10-1	
GG       1,1,2-Trichloroethane       79-00-5         HH       ✓ Tetrachloroethene       127-18-4         II       2-Hexanone       591-78-6         JJ       Dibromochloromethane       124-48-1         KK       ✓ 1,2-Dibromoethane       106-93-4         LL       ✓ Chlorobenzene       108-90-7       SPCC (%RSI         MM       ✓ Ethylbenzene       100-41-4       CCC (RRF)         NN       ✓ Xylenes(total)       1330-20-7       CCC (RRF)         OO       ✓ Styrene       100-42-5       SPCC (%RSI         PP       ✓ Bromoform       75-25-2       SPCC (%RSI         QQ       Isopropylbenzene       98-82-8       SPCC (%RSI         SS       1,3-Dichlorobenzene       541-73-1       SPCC (%RSI         SS       1,3-Dichlorobenzene       106-46-7       UU       1,2-Dichlorobenzene       95-50-1         VV       1,2-Dichlorobenzene       96-12-8       WW       1,2,4-Trichlorobenzene       120-82-1         XX       1,2,4-Trichlorobenzene       87-61-6       YY         ZZ       AAA       AAA	EE	Toluene	108-88-3	CCC (RRF)
HH       ✓ Tetrachloroethene       , 127-18-4         II       2-Hexanone       591-78-6         JJ       Dibromochloromethane       124-48-1         KK       ✓ 1,2-Dibromoethane       106-93-4         LL       ✓ Chlorobenzene       108-90-7       SPCC (%RSI         MM       ✓ Ethylbenzene       100-41-4       CCC (RRF)         NN       ✓ Xylenes(total)       1330-20-7         OO       ✓ Styrene       100-42-5         PP       ✓ Bromoform       75-25-2       SPCC (%RSI         QQ       Isopropylbenzene       98-82-8         RR       1,1,2,2-Tetrachloroethane       79-34-5       SPCC (%RSI         SS       1,3-Dichlorobenzene       541-73-1       TT         TT       1,4-Dichlorobenzene       106-46-7       TO         UU       1,2-Dichlorobenzene       95-50-1       TO         VV       1,2-Dibromo-3-chloropropane       96-12-8       TO         WW       1,2,4-Trichlorobenzene       87-61-6       TO         YY       ZZ       AAA       AAA	FF	trans-1,3-Dichloropropene	10061-02-6	
II	GG		79-00-5	
JJDibromochloromethane124-48-1KK✓ 1,2-Dibromoethane106-93-4LL✓ Chlorobenzene108-90-7SPCC (%RSIMM✓ Ethylbenzene100-41-4CCC (RRF)NN✓ Xylenes(total)1330-20-7OO✓ Styrene100-42-5PP✓ Bromoform75-25-2SPCC (%RSIQQIsopropylbenzene98-82-8RR1,1,2,2-Tetrachloroethane79-34-5SPCC (%RSISS1,3-Dichlorobenzene541-73-1TT1,4-Dichlorobenzene106-46-7UU1,2-Dichlorobenzene95-50-1VV1,2-Dibromo-3-chloropropane96-12-8WW1,2,4-Trichlorobenzene120-82-1XX1,2,4-Trichlorobenzene87-61-6YYZZAAAAAA	HH /	Tetrachloroethene	127-18-4	
KK	11	2-Hexanone	591-78-6	
LL       ✓ Chlorobenzene       108-90-7       SPCC (%RSI         MM       ✓ Ethylbenzene       100-41-4       CCC (RRF)         NN       ✓ Xylenes(total)       1330-20-7       COC (RRF)         OO       ✓ Styrene       100-42-5       SPCC (%RSI         PP       ✓ Bromoform       75-25-2       SPCC (%RSI         QQ       Isopropylbenzene       98-82-8       SPCC (%RSI         RR       1,1,2,2-Tetrachloroethane       79-34-5       SPCC (%RSI         SS       1,3-Dichlorobenzene       541-73-1       TT         TT       1,4-Dichlorobenzene       108-46-7       UU         UU       1,2-Dichlorobenzene       95-50-1       VV         VV       1,2-Dibromo-3-chloropropane       96-12-8       VV         XX       1,2,4-Trichlorobenzene       87-61-6       YY         ZZ       AAA       AAA	JJ	Dibromochloromethane	124-48-1	
MM       ∠       Ethylbenzene       100-41-4       CCC (RRF)         NN       ∠       Xylenes(total)       1330-20-7       CCC (RRF)         OO       ∠       Styrene       100-42-5       FOR COMMENT         PP       ∠       Bromoform       75-25-2       SPCC (%RSI         QQ       Isopropylbenzene       98-82-8       SPCC (%RSI         RR       1,1,2,2-Tetrachloroethane       79-34-5       SPCC (%RSI         SS       1,3-Dichlorobenzene       541-73-1       TT         TT       1,4-Dichlorobenzene       106-46-7       UU         UU       1,2-Dichlorobenzene       95-50-1       VV         VV       1,2-Dibromo-3-chloropropane       96-12-8       VV         WW       1,2,4-Trichlorobenzene       120-82-1       XX         XX       1,2,4-Trichlorobenzene       87-61-6       YY         ZZ       AAA       AAA       AAA	KK 🗸	1,2-Dibromoethane	106-93-4	
NN       ✓ Xylenes(total)       1330-20-7         OO       ✓ Styrene       100-42-5         PP       ✓ Bromoform       75-25-2       SPCC (%RSI         QQ       Isopropylbenzene       98-82-8         RR       1,1,2,2-Tetrachloroethane       79-34-5       SPCC (%RSI         SS       1,3-Dichlorobenzene       541-73-1       TT         TT       1,4-Dichlorobenzene       106-46-7       UU         UU       1,2-Dichlorobenzene       95-50-1       VV         VV       1,2-Dibromo-3-chloropropane       96-12-8       VV         WW       1,2,4-Trichlorobenzene       120-82-1       XX         XX       1,2,4-Trichlorobenzene       87-61-6       YY         ZZ       AAA       AAA	LL i/	Chlorobenzene	108-90-7	SPCC (%RSD)
NN       ✓ Xylenes(total)       1330-20-7         OO       ✓ Styrene       100-42-5         PP       ✓ Bromoform       75-25-2       SPCC (%RSI         QQ       Isopropylbenzene       98-82-8         RR       1,1,2,2-Tetrachloroethane       79-34-5       SPCC (%RSI         SS       1,3-Dichlorobenzene       541-73-1       TT         TT       1,4-Dichlorobenzene       106-46-7       UU         UU       1,2-Dichlorobenzene       95-50-1       VV         VV       1,2-Dibromo-3-chloropropane       96-12-8       VV         WW       1,2,4-Trichlorobenzene       120-82-1       XX         XX       1,2,4-Trichlorobenzene       87-61-6       YY         ZZ       AAA       AAA	MM v	Ethylbenzene	100-41-4	CCC (RRF)
OO         ✓ Styrene         100-42-5           PP         ✓ Bromoform         75-25-2         SPCC (%RSI           QQ         Isopropylbenzene         98-82-8         RR         1,1,2,2-Tetrachloroethane         79-34-5         SPCC (%RSI           SS         1,3-Dichlorobenzene         541-73-1         TT         1,4-Dichlorobenzene         106-46-7         UU         1,2-Dichlorobenzene         95-50-1         VV         1,2-Dibromo-3-chloropropane         96-12-8         WW         1,2,4-Trichlorobenzene         120-82-1         XX         1,2,4-Trichlorobenzene         87-61-6         YY           ZZ         AAA         AAA         AAA         AAA         AAA	NN ~	Xylenes(total)	1330-20-7	
QQ         Isopropylbenzene         98-82-8           RR         1,1,2,2-Tetrachloroethane         79-34-5         SPCC (%RSI           SS         1,3-Dichlorobenzene         541-73-1           TT         1,4-Dichlorobenzene         106-46-7           UU         1,2-Dichlorobenzene         95-50-1           VV         1,2-Dibromo-3-chloropropane         96-12-8           WW         1,2,4-Trichlorobenzene         120-82-1           XX         1,2,4-Trichlorobenzene         87-61-6           YY         ZZ           AAA         AAA			100-42-5	
QQ         Isopropylbenzene         98-82-8           RR         1,1,2,2-Tetrachloroethane         79-34-5         SPCC (%RSI           SS         1,3-Dichlorobenzene         541-73-1           TT         1,4-Dichlorobenzene         106-46-7           UU         1,2-Dichlorobenzene         95-50-1           VV         1,2-Dibromo-3-chloropropane         96-12-8           WW         1,2,4-Trichlorobenzene         120-82-1           XX         1,2,4-Trichlorobenzene         87-61-6           YY         ZZ           AAA         AAA	PP /	Bromoform	75-25-2	SPCC (%RSD)
RR       1,1,2,2-Tetrachloroethane       79-34-5       SPCC (%RSI         SS       1,3-Dichlorobenzene       541-73-1         TT       1,4-Dichlorobenzene       108-46-7         UU       1,2-Dichlorobenzene       95-50-1         VV       1,2-Dibromo-3-chloropropane       96-12-8         WW       1,2,4-Trichlorobenzene       120-82-1         XX       1,2,4-Trichlorobenzene       87-61-6         YY       2Z         AAA       AAA			<u> </u>	
SS       1,3-Dichlorobenzene       541-73-1         TT       1,4-Dichlorobenzene       106-46-7         UU       1,2-Dichlorobenzene       95-50-1         VV       1,2-Dibromo-3-chloropropane       96-12-8         WW       1,2,4-Trichlorobenzene       120-82-1         XX       1,2,4-Trichlorobenzene       87-61-6         YY       72         AAA       AAA				SPCC (%RSD)
TT       1,4-Dichlorobenzene       106-46-7         UU       1,2-Dichlorobenzene       95-50-1         VV       1,2-Dibromo-3-chloropropane       96-12-8         WW       1,2,4-Trichlorobenzene       120-82-1         XX       1,2,4-Trichlorobenzene       87-61-6         YY       2Z         AAA       AAA				
UU       1,2-Dichlorobenzene       95-50-1         VV       1,2-Dibromo-3-chloropropane       96-12-8         WW       1,2,4-Trichlorobenzene       120-82-1         XX       1,2,4-Trichlorobenzene       87-61-6         YY       2Z         AAA       AAA				
VV         1,2-Dibromo-3-chloropropane         96-12-8           WW         1,2,4-Trichlorobenzene         120-82-1           XX         1,2,4-Trichlorobenzene         87-61-6           YY         ZZ           AAA         AAA				
WW       1,2,4-Trichlorobenzene       120-82-1         XX       1,2,4-Trichlorobenzene       87-61-6         YY       2Z         AAA       AAA	1	The state of the s		
XX 1,2,4-Trichlorobenzene 87-61-6 YY ZZ AAA				
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SDG: B2/2///

Instrument ID: C-CMS-3 DATE ANALYZED: 12/9

BFB Tune OK? (YES) NO

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MS/MSD OK? YES NO

Comment:

LC5-1 JJ-74.4%; G-6-72.4%; F-282% Comment: Lcs-2 F-346%

LCS OK?

YES

	IC Date	: 14/9LW	CC Date:	12/9	Resulting Action
COMPOUND	< 0.05	> 30%	< 0.05	> 25%	"J", "UJ", "R" (Hit/Non-Detect)
Bromo melhane		40.24		39.3	5/05
Trichloro triflooroma Pau		37.79		62.4	
Acrone		62,22		645	4
		:			
Carbon D. sc I fole				43.0	JUS
1,1,1-TCA				27.7	
Vint Acetak				54.7	
Vind Acetak 2-Between			0,014	73-1	J/R
4-mcPy-2-pentanone				74.4	
1,1,2- Trichlowe Thank	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -			27.4	
2-Hexquon	•			76.4	V
1.3-Dichloroprepare				32.0	NT
Ch Corodibromene from				25.5	Jlus
Branchon				38-8	
1,1,2,2-Totachlerother				44.9	
	gar agri			<b></b>	

METHOD	BLANK	: <u>M</u>	<u>u</u>	<u> 13</u>

FIELD BLANK:\_

TRIP BLANK:

D۷	-worksheet-Method	8260B using	calibration criteria	from CLP National	Functional Guid	lelines for Organic	Reveiw-1999

CASE	: Morry Phis	II
	7	

SDG: B212/1/

Instrument ID: CCM5-3 DATE ANALYZED: 12/16 BFB Tune OK? YES NO

	Hold Time			Standards: (						ह)
	нота	TIME	S	urro	gat	es	Internals			S
Sample Number	Aro	All	1	2	3	4	1	2	3	4
Soil Chk										
Soil ChK							<u> </u>			
BIK				ļ			ļ			<u> </u> _
BZ12111-02 REI										4
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					<u> </u>				.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	L

MS/MSD OK? Comment:

LCS OK?

NO Comment:

	IC Date	: HH 'Y	CC Date: /	2/10	Resulting Action
COMPOUND	< 0.05	> 30%	< 0.05	> 25%	"J", "UJ", "R" (Hit/Non-Detect)
Bromenchicae		40.24		39.5	Tlur
Trichloroflewoodhan		37.79		88.1	
Act for		62.22		63.4	ν.
				A	
Chlore & Prove				39.5	Tlur
Carbon Disc Holy				34.0	
1,1,1-Trichoroethan		-	· · · · · ·	41.5	
Vial Austate				51.8	V
2-Betanen			0.017	67.3	JIR
Ca-ber Tatachlorid			· · · · · · · · · · · · · · · · · · ·	32.7	Tlus
Torchloro Mone				37. S	
4-melyl-2-portanone				68.7	
2-14ex more				72.1	
Yz/res				30.8	
Sylves Brane form			54	136-8267	
1,1,2,2-Totach broken			Hy	26-732.4	<b>V</b>
, , , , , , , , , , , , , , , , , , , ,					

METHOI	BLANK:	FIELD BLANK:	TRIP	BLANK:	/NT=
					1 non tanget
DV-worksh	cet-Method 8260B using calibration	criteria from CLP National Functional Guidelin	nes for Organic	Reveiw-1999	Congrand



Lab Responses

1380 Busch Parkway Buffalo Grove, Illinois 60089 Email: info@glalabs.com (847) 808-7766 FAX (847) 808-7772

September 8, 2005

Re: Questions on data package B212111

The following are answers to the questions outlined in an Email on September 7, 2005 to Andy Johnson.

- 1. & 2. The control limits found on the final report are the limits used for data evaluation. The limits on the raw data's QA/QC Report are not accurate. This form is mainly used by the analysts to check internal standard recoveries and 12 hour clock issues. Surrogates are evaluated against limits in the Laboratory Information Management System (LIMS). The LIMS is what is used to create the final report. Although the SOP in place at the time of the analysis did not explain this issue, the current revision does include this explanation.
- 3. The surrogate in question is Toluene-d8. Attached are the original quantitation reports, without any manual integration. I have also included a zoomed in view of the integration on the original and then on the manual. You can clearly see that there was slight peak tailing during these analyses so the manual integration was justified. If no manual integrations were performed on the surrogate, the limits would still have been met; therefore, the manual integrations were not performed to force recoveries within the established limits.
- The following equation is used:

Concentration ( $\mu g/Kg$ , dry) =  $C \times DF \times V$ W x X

Where:

C = On-Column concentration (ppb)

DF =Dilution factor.

V = final volume (ml).

W= amount of soil (g).

X= Percent solids (in decimal form; ex., 90%=0.90)

Therefore, using sample B212111-01 acetone:

C = 20.99 ppb

DF= 1

V = 5.0 m

W = 6.53g

X = 0.865

Concentration (ug/Kg, dry)=

20.99 ng/ml X 1 X 5.0ml

6.53g X 0.865

= 18.58

Then, the reporting limit (RL) is also adjusted for the sample weight and percent solids:

Original RL (ug/Kg) = 25 ug/Kg

25 X 5.0

Corrected RL (ug/Kg, dry) =  $6.53 \times 0.865 = 10$ 

The result of 18.58 is less than the RL of 22.13; therefore, the analyte is reported as ND.

If you have any other questions, please feel free to contact me directly. Have a great day!

Succeeds

mes Knapp

Quality Assurance Manager

jknapp@glalabs.com

Data File : D:\MS1RES~1\005.D Acq On : 9 Dec 2002 15:04

Sample : b212111-01

Misc

Inst : GC/MS 3 Multiplr: 1.00 Sample Amount: 0.00

Vial: 5

Operator: EU

MS Integration Params: rteint.p

Quant Time: Sep 8 11:44 2005 Quant Results File: 3110202S.RES

Quant Method : D:\MS1RES~1\3110202S.M (RTE Integrator)

Title : GCMS-3 Calibration Source:2100120

Last Update : Thu Sep 08 10:28:48 2005

Response via : Initial Calibration

DataAcq Meth: 3110202S

Internal Standards	R.T.	QIon	Response	Conc U	nits	Dev	(Min)
1) Pentafluorobenzene	17.81	168	470572	50.00	nnh		0.00
27) 1,4-Difluorobenzene	19.36		900941	50.00			0.00
49) Chlorobenzene-d5	24.97		398141	50.00			0.02
63) 1,4-Dichlorobenzene-d4	29.28		140536	50.00			0.02
				50.00	555		0.02
System Monitoring Compounds							
25) Dibromofluoromethane	17.71	111	316379	52.92	ppb		0.00
Spiked Amount 50.000	_	- 111	Recover			.84%	
30) 1,2-Dichloroethane-d4	18.50	65	308694	54.22	ppb		0.00
Spiked Amount 50.000	_	- 104	Recover	:y =	108	. 448‡	ŧ
44) Toluene-d8	22.21	98	914481	49.14	ppb		0.00
Spiked Amount 50.000	***	- 105	Recover	:y =	98	.28%	
61) 4-Bromofluorobenzene	27.14	95	268005	40.68	ppb		0.02
Spiked Amount 50.000	Range 90	- 105	Recover	:\ =	81	.36%‡	ŧ
Target Compounds						0	
2) Dichlorodifluoromethane	5.36	85	1255	0.00	nnh	#	alue
3) Chloromethane	5.80	50	2449	0.09 0.25			42 42
11) Acetone	11.55	43	89120	21.69		#	89
13) Carbon disulfide	11.78	76	5133	0.18		#	75
15) Methylene chloride	13.02	84	49847	0.93		11	98
23) Tetrahydrofuran	17.51		2222	0.71		#	35
24) Chloroform	17.64		271	0.02		#	1
29) 2-Butanone	16.64	72	307	0.32		π #	1
31) Carbon tetrachloride	17.81	117	54014	5.50		#	7
32) 1,1-Dichloropropene	17.81	75	39777	3.51		#	44
33) Benzene	18.49		20039	0.64		TT .	98
39) Bromodichloromethane	20.89		123	0.01		# .	26
40) 2-Nitropropane	21.58		775	0.23		#	1,
42) 4-Methyl-2-pentanone	22.21	43	5834	0.77		#	1
45) Toluene	22.33		18344	0.99		π	97
48) 2-Hexanone	23.78	43	565	0.09		#	31
50) Tetrachloroethene	23.34		721	0.17		π #	88
54) Chlorobenzene	25.01		604	0.04		#	27
56) Ethylbenzene	25.14		5988	0.21		#	87
57) m,p-Xylene	25.35	106	4593	0.49		Ħ	99
					T. L.		

<sup>(#) =</sup> qualifier out of range (m) = manual integration

005.D 3110202S.M Thu Sep 08 11:44:29 2005 GCMS1

Page 1

# Quantitation Report (Not Reviewed)

Data File : D:\MS1RES~1\005.D Vial: 5 Acq On : 9 Dec 2002 15:04 Operator: EU

Sample : b212111-01 Inst : GC/MS 3 Misc : > Multiplr: 1.00

Sample Amount: 0.00

MS Integration Params: rteint.p Quant Time: Sep 8 11:44 2005

Quant Results File: 31102028.RES

Quant Method : D:\MS1RES~1\3110202S.M (RTE Integrator)

Title : GCMS-3 Calibration Source:2100120

Last Update : Thu Sep 08 10:28:48 2005 Response via : Initial Calibration

DataAcq Meth: 3110202S

	Compound	R.T.	QIon	Response	Conc Unit	Qv	alue
58)	o-Xylene	26.14	106	150	0.02 ppb	#	1
59)	Styrene	26.18	104	886	0.06 ppb	#	30
64)	Isopropylbenzene	26.74	105	2115	0.13 ppb	#	47
65)	Bromobenzene	27.40	77	320	0.04 ppb	#	24
66)	• • • • • • • • • • • • • • • • • • • •	27.49	75	375	0.09 ppb	#	45
67)	n-Propylbenzene	27.47	91	9823	0.54 ppb	#	57
68)	2-Chlorotoluene	27.75	91	401	0.04 ppb	#	44
69)	1,3,5-Trimethylbenzene	27.81	105	2562	0.25 ppb	#	64
7.0 )	4-Chlorotoluene	27.94	91	268	0.03 ppb	#	1
71)	tert-Butylbenzene	28.42	119	488	0.04 ppb	#	37
72)	1,2,4-Trimethylbenzene	28.54	105	10935	1.08 ppb	#	52
73)	sec-Butylbenzene	28.84	105	5072	0.33 ppb	#	56
74)	1,3-Dichlorobenzene	29.16	146	2859	0.54 ppb	#	65
75)	p-Isopropyltoluene	29.12	119	1988	0.17 ppb	#	79
76)	1,4-Dichlorobenzene	29.31	146	3042	0.61 ppb	#	29
77)	n-Butylbenzene	29.89	91	276	0.03 ppb	#	43
78)	1,2-Dichlorobenzene	29.97	146	814	0.17 ppb	#	23
80)	1,2,4-Trichlorobenzene	32.30	180	3456	1.62 ppb	**	96
82)	Naphthalene	32.74	128	12688	1.90 ppb	#	74
83)	1,2,3-Trichlorobenzene	33.08	180	3557	1.77 ppb	#	93

<sup>(#) =</sup> qualifier out of range (m) = manual integration 005.D 3110202S.M Thu Sep 08 11:44:30 2005 GCMS1

## Quantitation Report

Data File : D:\MS1RES~1\005.D Acq On : 9 Dec 2002 15:04

Sample : b212111-01

Misc

: GC/MS 3 Inst Multiplr: 1.00

Sample Amount: 0.00

MS Integration Params: rteint.p Quant Time: Sep 8 11:44 2005

Quant Results File: 3110202S.RES

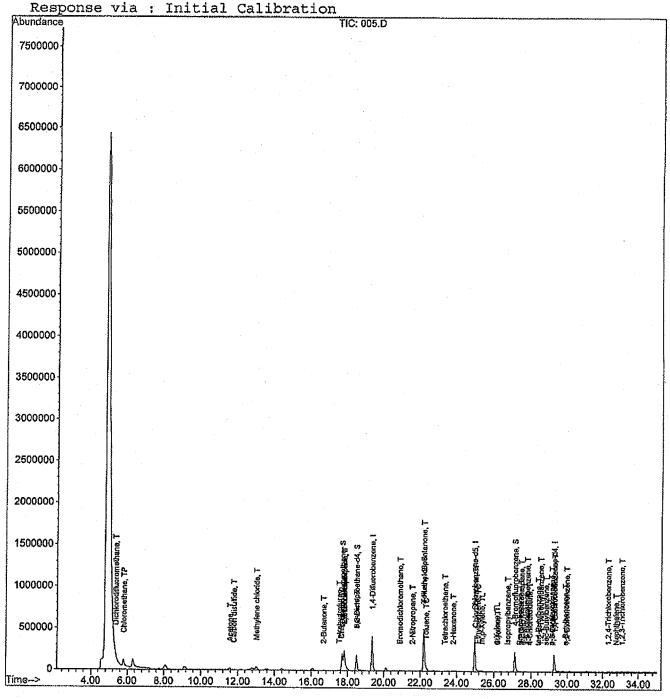
Vial: 5

Operator: EU

Method : D:\MS1RES~1\3110202S.M (RTE Integrator)

Title : GCMS-3 Calibration Source:2100120

Last Update : Thu Sep 08 11:43:54 2005

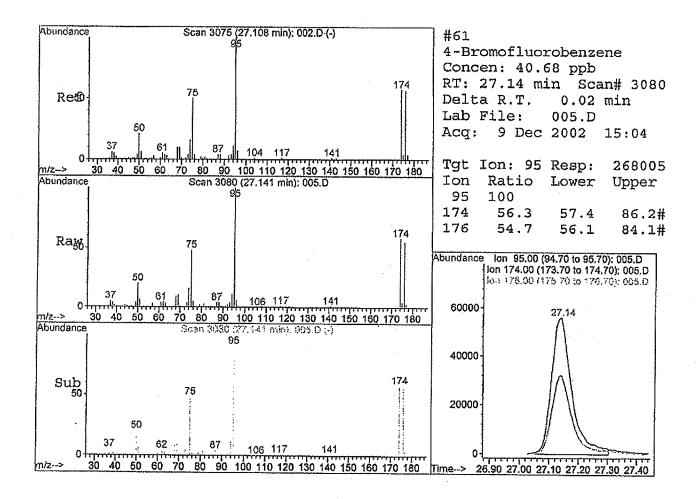


005.D 31102028.M

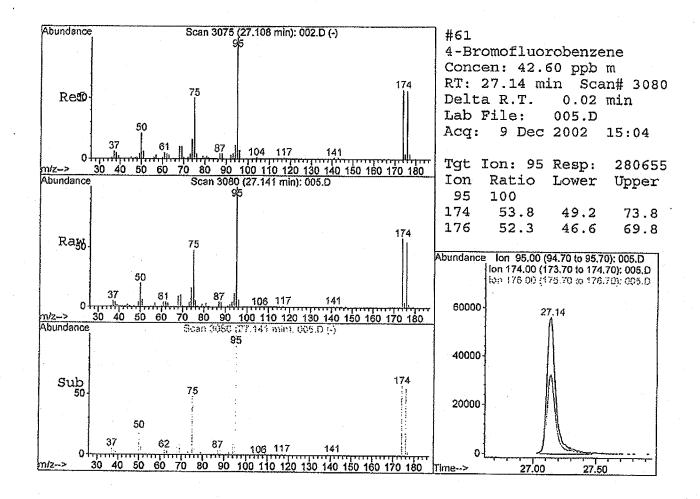
Thu Sep 08 11:44:33 2005

GCMS1

Page 3



original



warred stron

Data File : D:\MS1RES~1\004.D Acq On : 10 Dec 2002 12:11 : b212111-02RE1

Sample

Misc

Vial: 4 Operator: EU

Inst : GC/MS 3 Multiplr: 1.00 Sample Amount: 0.00

MS Integration Params: rteint.p Quant Time: Sep 8 11:52 2005

Quant Results File: 31102028.RES

Quant Method : D:\MS1RES~1\3110202S.M (RTE Integrator)

: GCMS-3 Calibration Source:2100120

Last Update : Thu Sep 08 10:28:48 2005

Response via : Initial Calibration

DataAcq Meth: 31102025

Internal Standards	R.T. QI	on Response	Conc Un	nits	Dev(Min)
<ol> <li>Pentafluorobenzene</li> <li>1,4-Difluorobenzene</li> <li>Chlorobenzene-d5</li> <li>1,4-Dichlorobenzene-d4</li> </ol>	19.34 1 24.95	68 443036 14 876058 82 435937 52 160327	50.00 50.00 50.00	ppb ppb	-0.01 0.00
•	20.20 1	52 100527	50.00	քեր	0.00
System Monitoring Compounds					
25) Dibromofluoromethane		11 302763	53.79	ppb	-0.03
Spiked Amount 50.000	Range 91 -			107.5	58%
30) 1,2-Dichloroethane-d4		65 298407	53.90	ppb	-0.02
Spiked Amount 50.000	Range 85 -			107.8	308#
44) Toluene-d8		98 904646	49.99	ppb	-0.01
Spiked Amount 50.000	Range 95 -		ry =	99.9	98%
61) 4-Bromofluorobenzene	and the second of the second o	95 292359	40.53	ppb	0.00
Spiked Amount 50.000	Range 90 -	105 Recove	ry =	81.0	)68#
Target Compounds					Qvalue
3) Chloromethane	5.80	3734	0.40	nnh	# 42
11) Acetone		13 84645	21.88		89
15) Methylene chloride		34 36951	-0.50		96
23) Tetrahydrofuran		12 148	0.05		# 35
24) Chloroform	•	33 167	0.01		# 18
29) 2-Butanone		72 140	0.15		# 1
31) Carbon tetrachloride	17.79 13		5.74		# 7
32) 1,1-Dichloropropene		5 32144	2.92		# 45
33) Benzene		78 16816	0.56		99
39) Bromodichloromethane		3 2957	0.33		# 26
40) 2-Nitropropane	21.59	3 7198	2.23		# 52
42) 4-Methyl-2-pentanone	22.19	3 5605	0.76		# 1
45) Toluene	22.32	15081	0.83		98
47) 1,1,2-Trichloroethane	23.41 8	1871	0.38	daa	# 6
48) 2-Hexanone	23.79	3 235	0.04		# 31
50) Tetrachloroethene	23.30 16		0.06		# 34
54) Chlorobenzene	25.02 11		0.08		# 27
56) Ethylbenzene	25.12		0.16		# 37
57) m,p-Xylene	25.33 10	6 6046	0.59 r	dqo	# 68
58) o-Xylene	26.10 10	6 2115	0.21 r	opb	# 35

<sup>(#) =</sup> qualifier out of range (m) = manual integration

004.D 3110202S.M Thu Sep 08 11:52:38 2005 GCMS1

Page 1

## Quantitation Report (Not Reviewed)

Data File : D:\MS1RES~1\004.D Vial: 4 Acq On : 10 Dec 2002 12:11 Operator: EU

Sample : b212111-02RE1 Inst : GC/MS 3 Misc Multiplr: 1.00

Sample Amount: 0.00

MS Integration Params: rteint.p Quant Time: Sep 8 11:52 2005

Quant Results File: 3110202S.RES

Quant Method : D:\MS1RES~1\3110202S.M (RTE Integrator)

Title : GCMS-3 Calibration Source:2100120

Last Update : Thu Sep 08 10:28:48 2005 Response via : Initial Calibration

DataAcq Meth : 3110202S

Compound	R.T.	QIon	Response	Conc Unit	Qvalue	
59) Styrene	26.16	104	1249	0.07 ppb		87
62) 1,1,2,2-Tetrachloroethane	27.47	83	127	0.02 ppb	#	24
64) Isopropylbenzene	26.70	105	5126	0.27 ppb	#	52
65) Bromobenzene	27.42	77	2621	0.27 ppb	#	32
66) 1,2,3-Trichloropropane	27.48	75	323	0.07 ppb	#	45
67) n-Propylbenzene	27.48	91	11646	0.56 ppb	#	79
68) 2-Chlorotoluene	27.71	91	1146	0.09 ppb	#	63
69) 1,3,5-Trimethylbenzene	27.82	105	2058	0.17 ppb	#	67
70) 4-Chlorotoluene	27.95	91	1452	0.12 ppb	#	43
71) tert-Butylbenzene	28.38	119	4839	0.37 ppb	#	44
72) 1,2,4-Trimethylbenzene	28.52	105	17365	1.51 ppb	#	83
73) sec-Butylbenzene	28.80	105	2612	0.15 ppb	#	79
74) 1,3-Dichlorobenzene	29.13	146	2308	0.38 ppb	#	45
75) p-Isopropyltoluene	29.03	119	12418	0.95 ppb	#	76
76) 1,4-Dichlorobenzene	29.31	146	2969	0.52 ppb	#	25
77) n-Butylbenzene	29.90	91	1347	0.13 ppb	#	30
78) 1,2-Dichlorobenzene	30.02	146	126	0.02 ppb	#	24
79) 1,2-Dibromo-3-chloropropan			126	0.14 ppb	#	2
80) 1,2,4-Trichlorobenzene	32.26	180	4420	1.81 ppb	#	93
82) Naphthalene	32.71	128	17816	2.34 ppb	#	83
83) 1,2,3-Trichlorobenzene	33.03	180	5368	2.34 ppb		94

#### Quantitation Report

Data File : D:\MS1RES-1\004.D

Acq On : 10 Dec 2002 12:11

Sample Misc

: b212111-02RE1

Operator: EU : GC/MS 3 Inst

Multiplr: 1.00 Sample Amount: 0.00

Vial: 4

MS Integration Params: rteint.p

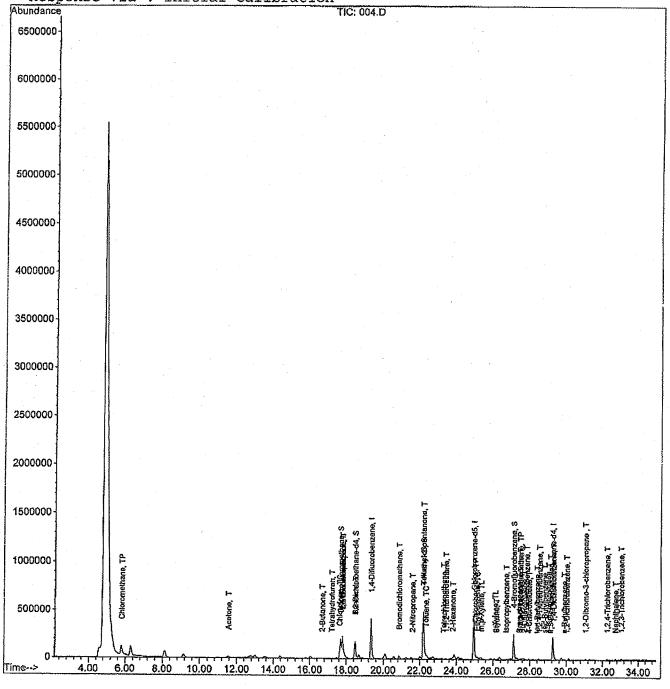
Quant Time: Sep 8 11:52 2005

Quant Results File: 31102025.RES

Method : D:\MS1RES~1\3110202S.M (RTE Integrator)

Title : GCMS-3 Calibration Source:2100120

Last Update : Thu Sep 08 11:51:56 2005 Response via : Initial Calibration

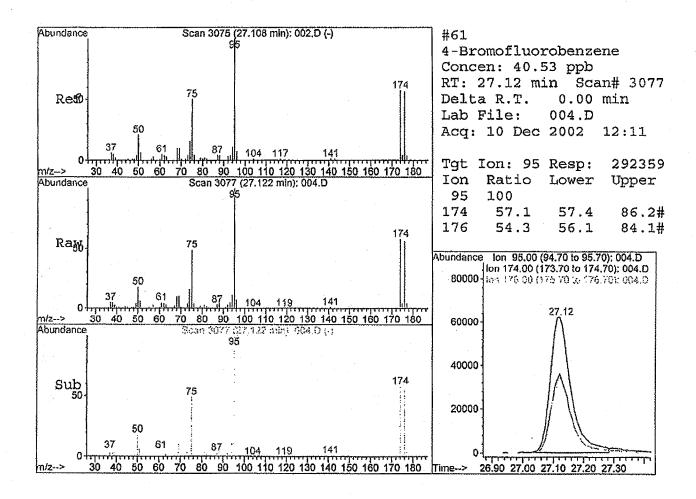


004.D 3110202S.M

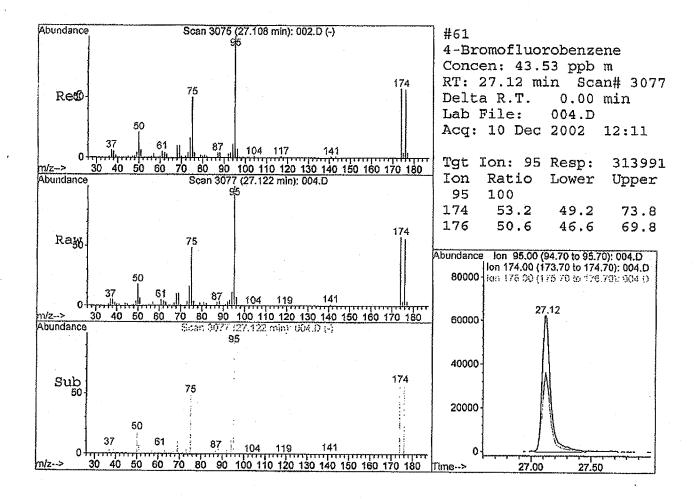
Thu Sep 08 11:52:42 2005

GCMS1

Page 3



grigoral



warmal water

Data File : D:\MS1RES~1\004.D Acq On : 9 Dec 2002 14:15

Sample : b212111-03

Misc

Inst : GC/MS 3 Multiplr: 1.00 Sample Amount: 0.00

MS Integration Params: rteint.p

Quant Time: Sep 8 11:32 2005

Quant Results File: 3110202S.RES

Vial: 4

Operator: EU

Quant Method : D:\MS1RES~1\3110202S.M (RTE Integrator)

Title : GCMS-3 Calibration Source:2100120

Last Update : Thu Sep 08 10:28:48 2005

Response via: Initial Calibration

DataAcq Meth: 31102028

Internal Standards	R.T.	QIon	Response	Conc U	nits	Dev	(Min)
<ol> <li>Pentafluorobenzene</li> <li>1,4-Difluorobenzene</li> <li>Chlorobenzene-d5</li> <li>1,4-Dichlorobenzene-d4</li> </ol>	17.82 19.37 24.97 29.28	114	453921 890971 431772 202888	50.00 50.00 50.00	ppb ppb		0.01 0.01 0.02
	47,20	1.42	202000	50.00	րիո		0.02
System Monitoring Compounds							
25) Dibromofluoromethane	17.72	111	301453	52.27			0.01
Spiked Amount 50.000		- 111			104.	54%	
30) 1,2-Dichloroethane-d4	18.51	65	291305	51.73			0.01
Spiked Amount 50.000	_	- 104			103.	46%	
44) Toluene-d8	22.21	98	924330	50.23			0.02
Spiked Amount 50.000	_	- 105	Recove		100.	46%	
61) 4-Bromofluorobenzene	27.13	95	333957	46.74			0.01
Spiked Amount 50.000	Range 90	- 105	Recover	<b>:</b> y =	93.	48%	
Target Compounds		•				Ove	lue
3) Chloromethane	5.87	50	2032	0.21	nnh	#	42
5) Bromomethane	7.29	94	127	0.03			1
11) Acetone	11.05	43	2514	0.63		#	41
15) Methylene chloride	13.05	84	43321	0.26		<b>1</b> 7	97
23) Tetrahydrofuran	17.52	42	970	0.32		#	35
24) Chloroform	17.68	83	396	0.03		#	1
29) 2-Butanone	16.72	72	888	0.95		#	1
31) Carbon tetrachloride	17.82	117	56599	5.83		#	5
32) 1,1-Dichloropropene	18.03	75	1027	0.09		#	42
33) Benzene	18.51	78	17481	0.57		11	95
40) 2-Nitropropane	21.63		1293	0.39		#	62
42) 4-Methyl-2-pentanone	22.21	43	5526	0.73		#	1
45) Toluene	22.34	92	15268	0.83		II.	94
48) 2-Hexanone	23.81	43	328	0.05		#	31
50) Tetrachloroethene	23.33	1.64	931	0.20		#	70
54) Chlorobenzene	25.03	112	1369	0.08		#	27
56) Ethylbenzene	25.13	91	5017	0.16		. #	90
57) m,p-Xylene	25.35		4361	0.43		#	58
58) o-Xylene	26.11		991	0.10		#	1
59) Styrene	26.18	104	1579	0.09		#	76
						••	

(#) = qualifier out of range (m) = manual integration 004.D 3110202S.M Thu Sep 08 11:34:16 2005 GCMS1

Page 1

# Quantitation Report (Not Reviewed)

Data File : D:\MS1RES~1\004.D Vial: 4 Acq On : 9 Dec 2002 14:15 Operator: EU Sample : b212111-03 Inst : GC/MS 3 Misc Multiplr: 1.00

Sample Amount: 0.00

MS Integration Params: rteint.p

Quant Time: Sep 8 11:32 2005 Quant Results File: 3110202S.RES

Quant Method : D:\MS1RES~1\3110202S.M (RTE Integrator)

Title : GCMS-3 Calibration Source:2100120

Last Update : Thu Sep 08 10:28:48 2005

Response via : Initial Calibration

DataAcq Meth: 31102028

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue	
64)	Isopropylbenzene	26.72	105	1120	0.05 ppb	#	47
65)	Bromobenzene	27.43	77	2039	0.16 ppb	#	43
66)	1,2,3-Trichloropropane	27.52	75	575	0.10 ppb	#	45
67)	n-Propylbenzene	27.47	91	7955	0.30 ppb	#	68
68)	2-Chlorotoluene	27.72	91	2159	0.13 ppb	#	44
69)	, ,	27.82	105	4052	0.27 ppb		92
70)	4-Chlorotoluene	27.96	91	4947	0.33 ppb	#	56
71)	tert-Butylbenzene	28.42	119	2065	0.12 ppb	#	75
72)	1,2,4-Trimethylbenzene	28.53	105	11620	0.80 ppb		87
73)	sec-Butylbenzene	28.82	105	2202	0.10 ppb	#	69
74)	1,3-Dichlorobenzene	29.16	146	4314	0.56 ppb		91
75)	Z Z Z	29.04	119	11851	0.72 ppb	#	58
76)	1,4-Dichlorobenzene	29.32	146	4083	0.56 ppb	#	1
	n-Butylbenzene	29.91	91	1265	0.10 ppb	#	30
78)	1,2-Dichlorobenzene	29.91	146	3994	0.58 ppb	#	3.1
79)	1,2-Dibromo-3-chloropropan	31.09	75	166	0.15 ppb	#	2
80)	1,2,4-Trichlorobenzene	32.38	180	275	0.09 ppb	#	18
82)	Naphthalene	32.80	128	5001	0.52 ppb	#	71
83)	1,2,3-Trichlorobenzene	33.06	180	4569	1.57 ppb	•••	92

<sup>(#) =</sup> qualifier out of range (m) = manual integration 004.D 3110202S.M Thu Sep 08 11:34:17 2005 GCMS1

## Quantitation Report

Data File : D:\MS1RES~1\004.D Acq On

Sample : b212111-03

Misc

: 9 Dec 2002 14:15

Inst : GC/MS 3 Multiplr: 1.00

Vial: 4

Operator: EU

Sample Amount: 0.00

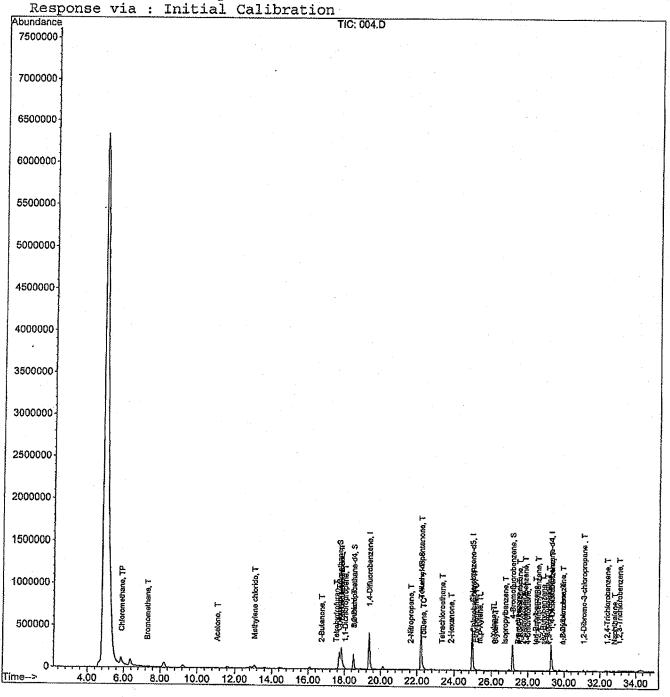
MS Integration Params: rteint.p

Quant Time: Sep 8 11:32 2005 Quant Results File: 3110202S.RES

Method : D:\MS1RES~1\3110202S.M (RTE Integrator)

Title : GCMS-3 Calibration Source:2100120

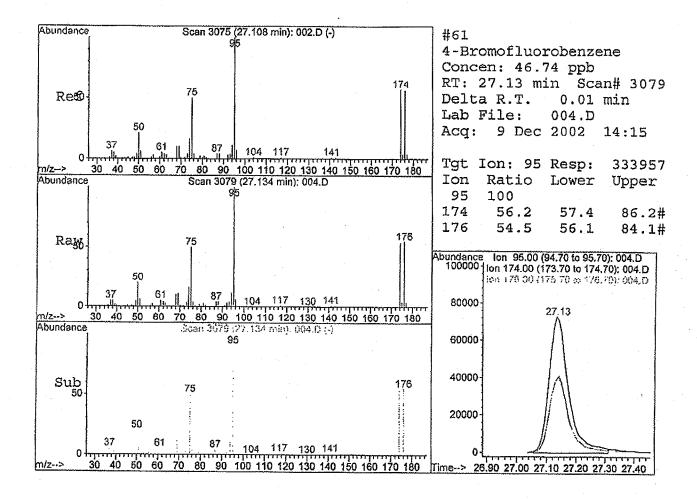
Last Update : Thu Sep 08 11:31:44 2005



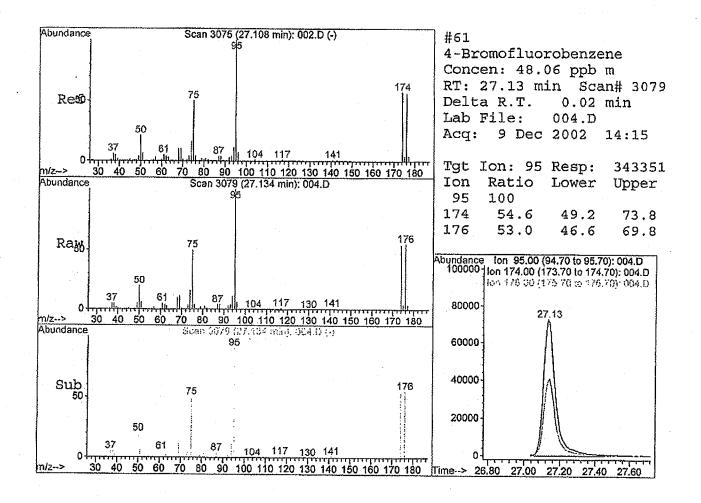
004.D 31102025.M Thu Sep 08 11:34:20 2005

GCMS1

Page 3



prigned



Warmer

**Qualified Data Reports** 



1380 Busch Parkway Buffalo Grove, Illinois 60089 Email: info@glalabs.com (847) 808-7766 FAX (847) 808-7772

CDM

125 S. Wacker Dr. Suite 600

Chicago IL, 60606

Project: Morey Phase II

Project Number: Morey P2

Project Manager: Mark Peters

Reported: 12/12/02 16:29

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MP-SB-01-1416	B212111-01	Soil	12/05/02 09:30	12/06/02 11:00
MP-SB-01-5254	B212111-02	Soil	12/05/02 12:05	12/06/02 11:00
MP-SB-01-7678	B212111-03	Soil	12/05/02 14:30	12/06/02 11:00

**MOR 08598** 

Great Lakes Analytical--Buffalo Grove

Andy Jahman

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1380 Busch Parkway Buffalo Grove, Illinois 60089 Email: info@glalabs.com (847) 808-7766 FAX (847) 808-7772

CDM .

125 S. Wacker Dr. Suite 600 Chicago IL, 60606 Project: Morey Phase II

Project Number: Morey P2
Project Manager: Mark Peters

Reported: 12/12/02 16:29

### **General Chemistry**

### Great Lakes Analytical--Buffalo Grove

Analyte	Result	eporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MP-SB-01-1416 (B212111-01) Soil	Sampled: 12/05/02 09:	30 Rece	ived: 12	/06/02 11:0	00				
рН	7.79	1	oH Units	1	2120252	12/12/02	12/12/02	EPA 9045C	
MP-SB-01-5254 (B212111-02) Soil	Sampled: 12/05/02 12:	05 Rece	ived: 12/	06/02 11:0	00				
pH	7.76	1	H Units	1	2120252	12/12/02	12/12/02	EPA 9045C	
MP-SB-01-7678 (B212111-03) Soil	Sampled: 12/05/02 14:	30 Rece	ived: 12/	06/02 11:0	00				
pH	7.75	ı	H Units	1	2120252	12/12/02	12/12/02	EPA 9045C	

**MOR 08599** 

Great Lakes Analytical--Buffalo Grove

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CDM

125 S. Wacker Dr. Suite 600 Chicago IL, 60606 Project: Morey Phase II

Project Number: Morey P2
Project Manager: Mark Peters

Reported: 12/12/02 16:29

# Volatile Organic Compounds by EPA Method 5035/8260B

# Great Lakes Analytical--Buffalo Grove

Analyte	Result	Reporting Limit		Dilution	Batch	Prepared	Analyzed	Method	Note
MP-SB-01-1416 (B212111-01) Soil	Sampled: 12/05/02								Q
Acetone	ND V	J 22.1	ug/kg dry	1	2120162	12/09/02	12/09/02 5	035/8260B	
Benzene	ND	4.43	11	11	H	ti	n.	И	
Bromodichloromethane	ND	4.43			n	0.0		<b>n</b>	
Bromoform	ND 🗸	T 4.43	n	. 0	10	н	m Tarabas	11	
Bromomethane	ND V.	T 4.43		н	Ħ	n	n,	H	
2-Butanone	FLANT RND-6	T 8.85	. n · · · · ·	e <b>n</b> .	. 0	Di .	11	TP	
Carbon disulfide	ND V	4.43	# ***	· 11	n i	n ,	Ħ	n 1 1 1 1 1 1	
Carbon tetrachloride	ND	4.43	, <b>ti</b> ,	11	11		0	n	
Chlorobenzene	ND	4,43	ii .	н	Ħ		er e	11	
Chlorodibromomethane	ND U	J 4.43	11	u	n .	'n	8	<b>37</b>	
Chloroethane	ND	4,43	a ·	11	111	n n	*		
Chloroform	ND	4.43	н	31	11 -	: #	н	H .	
Chloromethane	ND	4.43	11	10	11	n	и	n	
1,1-Dichloroethane	ND	4.43	111	H	n	19	11	Ø	
1,2-Dichloroethane	ND	4.43	Ħ	H			u .	n ·	
1,1-Dichloroethene	ND	4.43	. ú	. It	11		' <b>n</b> -	n ·	
cis-1,2-Dichloroethene	ND	4.43	u	19	#	п	Ħ	11	
trans-1,2-Dichloroethene	ND	4.43		n	11	11	1 m		
1,2-Dichloropropane	ND	4.43	Ħ	11	11	11		н	
1,3-Dichloropropene (cis + trans)	ND	2.66	n	11	Ú.	11	11	u	
Ethylbenzene	ND	4,43		p		н	n	11	
2-Hexanone	ND UJ	8.85		**	tt			u .	
Methylene chloride	ND	4.43	11		11	tt .		11	
4-Methyl-2-pentanone	ND UJ	8.85	**	 H'		11	"		
Styrene	ND ND	4.43	tr			11			
1,1,2,2-Tetrachloroethane	ND vj	4.43	n		n				
Tetrachloroethene	ND ND	4.43	11		11	я	or .		
Toluene	ND ND	4.43	11	41	11	11			
1,1,1-Trichloroethane	ND UJ	1.7.575			"	"			
1,1,2-Trichloroethane	ND V		11		ń				•
Trichloroethene	ND D	4.43	n	11	31	,			
Trichlorofluoromethane			11		11	. 11	,		
Vinyl acetate	7		11	n	,,	11		11	
Vinyl chloride	ND VJ	8.85	11	"	" "	) )	11	,	
Total Xylenes	ND ND	4.43	"	". "	"		11 11	n n	
	עא	8.85			-	***************************************			***********
Surrogate: Dibromofluoromethane		106 %	73.8-142		W	. "	"	"	
Surrogate: 1,2-Dichloroethane-d4		108 %	61.8-168	3	"	. 11	<i>u</i>	<i>"</i>	
Surrogate: Toluene-d8		98.2 %	70.1-13		"	"	,,,	n .	
Surrogate: 4-Bromofluorobenzene		85.1 %	66.3-119	)	#	· "	<i>n</i>	e e	

Great Lakes Analytical--Buffalo Grove

Andy Johnson

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Andy Johnson, Project Manager

**MOR 08600** 

Page 3 of 7





# 1380 Busch Parkway Buffalo Grove, Illinois 60089

Email: info@glalabs.com (847) 808-7766 FAX (847) 808-7772

CDM

125 S. Wacker Dr. Suite 600 Chicago IL, 60606 Project: Morey Phase II

Project Number: Morey P2
Project Manager: Mark Peters

Reported: 12/12/02 16:29

# Volatile Organic Compounds by EPA Method 5035/8260B

Great Lakes Analytical--Buffalo Grove

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MP-SB-01-5254 (B212111-02RE1) Soil	Sampled: 12/05	5/02 12:05	Received:	12/06/02	11:00				QC,A-01
Acetone	ND UJ	22.0	ug/kg dry	1	2120162	12/09/02	12/10/02	5035/8260B	***************************************
Benzene	ND ND	4.39	a	Ü	11	H	11	n ·	
Bromodichloromethane	ND	4.39	n n	.11	11	H	18	11	
Bromoform	ND VJ	4.39	. 11		11	H ·	11	R	
Bromomethane	ND U	7 4.39	11	, m		#	11		
2-Butanone	or R. ND US	8.79	~ "	#1	H		n	n	
Carbon disulfide	ND US	4.39	U		n	. H	. #	10	
Carbon tetrachloride	ND UT	4.39	31	n i	.00	H	и .	n in the second	
Chlorobenzene	ND	4.39	1)	17	, H	17	#	n	
Chlorodibromomethane	ND	4.39	W,	u ,	11	11	n * **		
Chloroethane	ND UJ	4.39	#1	н	n	tí .	<b>#</b> .	10	
Chloroform	ND	4.39	н	13	11	18	и - 1	10	
Chloromethane	ND	4.39	u ·	11	H	ŋ	11	11	
1,1-Dichloroethane	ND	4.39	u	11	*1		1)	Ħ	
1,2-Dichloroethane	ND	4.39	0	#	· u	ir	11	w	
1,1-Dichloroethene	ND	4.39	11	н	н .		. 11	11	
cis-1,2-Dichloroethene	ND	4.39	17	#	11		19		
trans-1,2-Dichloroethene	ND	4.39	er				0	11	t = t(g) = -t(g)
1,2-Dichloropropane	ND	4.39	#1	tt.	n .	ŧi	11		
1,3-Dichloropropene (cis + trans)	ND	2.64	н	1)	н	n	**		
Ethylbenzene	ND	4.39	η.	11	**	**			
2-Hexanone	ND UJ	8.79	11	,	"	11	11	11	•
Methylene chloride	ND ND	4.39		,	n		11	**	
4-Methyl-2-pentanone	ND UJ	8.79	Ħ	19	16		n		
Styrene	ND	4.39	#		11				
1,1,2,2-Tetrachloroethane	ND W	4.39	11	. ,		v	** **		
Tetrachloroethene	ND ND	4.39	11	11	,,	#	,,		
Toluene	ND	4.39	n	39			"		
1,1,1-Trichloroethane	ND vor			u .	н	. "	"		
1,1,2-Trichloroethane	ND 00	4.39 4.39		11	,,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,,		
Trichloroethene	ND VJ		u		,		ii .	,	
Trichlorofluoromethane	7 4 7 7 7 7 7	4.39	" "	"		,	17 10		
Vinyl acetate	ND VJ ND VJ	4.39	0		"	."	"		
Vinyl acctate Vinyl chloride		8.79	,,	0	"		"	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Total Xylenes	ND	4.39	11	" "		्, म		e ja et et e	
The state of the s	ND UJ	8,79			. 11		Ħ	<b>)</b>	
Surrogate: Dibromofluoromethane		108 %	73.8-14	_	n	#	"	<b>H</b> .	
Surrogate: 1,2-Dichloroethane-d4		108 %	61.8-16	8	н .	. "	"	, , , <b>, ,</b> ,	
Surrogate: Toluene-d8		100 %	70.1-13	1	n	"	"	<i>n</i> · · ·	
Surrogate: 4-Bromofluorobenzene		87.0 %	66.3-11	9	#	· · · · · ·	, #	<i>n</i>	

Great Lakes Analytical--Buffalo Grove

Andy Johnson

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Andy Johnson, Project Manager

**MOR 08601** 

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9/19/05 1380 Busch Parkway Buffalo Grove, Illinois 60089

Email: info@glalabs.com (847) 808-7766 FAX (847) 808-7772

CDM

125 S. Wacker Dr. Suite 600 Chicago IL, 60606

Project: Morey Phase II

Project Number: Morey P2 Project Manager: Mark Peters

Reported: 12/12/02 16:29

# Volatile Organic Compounds by EPA Method 5035/8260B Great Lakes Analytical--Buffalo Grove

Analyte	R Result	eporting Limit Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MP-SB-01-7678 (B212111-03) Soil	and the second s	30 Received: 1	12/06/02 11:0	0				QC
Acetone	ND UJ	19.0 ug/kg di	ry l	2120162	12/09/02	12/09/02	5035/8260B	
Benzene	ND	3.80	,	n	11	H .	н	
Bromodichloromethane	ND	3.80 "	ŧi	ii	ŧı		ti di di	
Bromoform	ND UJ	3.80 "	.0	#	tt .	. 11	tr .	
Bromomethane	ND UJ	3.80 "	11	. "	u u	**	и	
2-Butanone	THE R NO US	7.60 "		n	. <b>H</b>	11	fi fi	•
Carbon disulfide	" UN UJ	3.80	**	H	n	11	n	
Carbon tetrachloride	ND	3.80 "	**	. 11	jı	. я	H <sub>1</sub> (1)	
Chlorobenzene	ND	3.80 "	11	ii .	n	11		
Chlorodibromomethane	ND UJ	3.80 "	tt.	ø,	n n	н	n	
Chloroethane	ND	3,80 "	н	H	n		n	
Chloroform	ND	3.80 "	#	<b>B</b>	, u	H	ii .	
Chloromethane	ND	3.80 "	n	**	11	10	Ħ	
1,1-Dichloroethane	ND	3.80 "	It .	1 11	H	į, n	U	
1,2-Dichloroethane	ND	3.80 "	Ħ	#1	, H	fi	n .	
1,1-Dichloroethene	ND	3.80 "	fi	u ·	#	18	11	
cis-1,2-Dichloroethene	ND	3.80 "	0.00	Ħ	Ħ	P	Ħ	
trans-1,2-Dichloroethene	ND	3.80 "	н.,	. "	19	Ħ	n'	
1,2-Dichloropropane	ND	3.80 "	er er	**		н	er e	
1,3-Dichloropropene (cis + trans)	ND	2.28 "	n .	н	11	11	n	
Ethylbenzene	ND	3.80 "	10	. 11	11	Ħ	and the state of t	
2-Hexanone	ND UJ	7.60 "	**		n n	ir	9 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	
Methylene chloride	ND	3.80 "			<b>n</b> ***	.11	11	
4-Methyl-2-pentanone	ND W	7.60 "	. 11	#	11		v	
Styrene	ND ND	3.80 "	n n	11	n	. н	"	
1,1,2,2-Tetrachloroethane	ND UT	3.80 "	. H	13	H.		11	
Tetrachloroethene	ND	3.80 "		11	n		11	
Toluene	ND	3.80 "	,,			n	0	
1,1,1-Trichloroethane	NDOJ	3.80 "	i)	,,	n	11	31	
1,1,2-Trichloroethane	ND UJ	3.80	31	91		,,		
Trichloroethene	ND OJ	3.80 "	#		n			
Trichlorofluoromethane	ND UJ	3.80 "			ii .	n		
Vinyl acetate	ND WT		Ħ		11	" II	,	
Vinyl acctate Vinyl chloride		7.00	<b>"</b>		,, ,,	,,		
Total Xylenes	ND	3.00	11	11		17		
	ND	7.00		<del></del>	Ft .		ii	
Surrogate: Dibromofluoromethane			8-142	H	<i>#</i>	, , ,	n	
Surrogate: 1,2-Dichloroethane-d4			8-168	. "	"	"	n	
Surrogate: Toluene-d8			1-131	n .	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,,	n	
Surrogate: 4-Bromofluorobenzene	9	6.1% 66.3	3-119	"		#	'n	

Great Lakes Analytical--Buffalo Grove

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Andy Johnson, Project Manager

MOR 08602

Page 5 of 7

# CDM Data Validation Report

Project/Site Name:

Morey Phase II

**Collection Date:** 

December 06, 2002

**CDM Report Date:** 

September 19, 2005

Matrix:

Soil

Parameters:

Volatiles

Validation Level:

Level IV

Laboratory:

Great Lakes Analytical

Sample Delivery Group (SDG):

B212115

Sample Identification

Site ID	<u>Lab ID</u>
MP-SB-02-1416	B212115-01
MP-SB-02-6870	B212115-02
MP-SB-D	B212115-03
MP-SB-03-1820	B212115-04
MP-SB-03-3840	B212115-05
MP-SB-04-1820	B212115-06

#### Introduction

This data review covers 6 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

Data qualifiers were added as appropriate to a copy of the data reports. These modified data reports are provided at the end of this report.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

The following are definitions of the data qualifiers:

- U Indicates the compound was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

### I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

#### II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

#### III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 15.0% for each individual compound and less than or equal to 30.0% for calibration check compounds (CCCs).

In the case where %RSD was greater than 15.0%, the laboratory used a calibration curve to evaluate the compound. All coefficients of determination () were greater than or equal to 0.990.

For the purpose of technical evaluation, all compounds were evaluated against the 30.0% (%RSD) and 0.05 relative response factor (RRF) National Functional Guideline criteria. All compounds were within the validation criteria with the following exceptions:

Date	Compound	%RSD	Associated Samples	Flag	RRF
11/5/02	Bromomethane	40.24	All	J (all detects)	
	Trichlorotrifluoromethane	37.78			
	Acetone	62.22			

Average relative response factors (RRF) for all volatile target compounds and system performance check compounds (SPCCs) were within method and validation criteria.

### IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs).

For the purpose of technical evaluation, all compounds were evaluated against the 25.0% (%D) and 0.05 RRF National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	RRF
12/09/02	Bromomethane	39.3	MP-SB-02-1416	J (all detects)	
	Trichlorotrifluoromethane	62.4	MP-SB-02-6870	UJ (all non-detects)	:
	Acetone	64.5	MP-SB-D		
	Carbon disulfide	43.0	MP-SB-03-1820		
	1,1,1-trichloroethane	27.7	MP-SB-03-3840		
	Vinyl acetate	54.7	MP-SB-04-1820		
	2-Butanone	73.1		R (2-butanon non-	0.014
	4-methyl-2-pentanone	74.4		detects)	
	1,1,2-trichloroethane	27.4			
	2-hexanone	76.6			
	Chlorodibromomethane	25.5		Parameter	
	Bromoform	38.8		·	
	1,1,2,2-tetrachloroethane	44.9			

#### V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Analysis Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
BLK 2120162	12/09/02	Methylene chloride	13	All

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
MP-SB-02-6870	Methylene chloride	4.89	4.89 U
MP-SB-04-1820	Methylene chloride	6.52	6.52 UJ
-			

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were either not detected or were significantly greater (> 10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated field blanks with the following exceptions:

There were no field blanks associated with the samples contained in this SDG.

### VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

### VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

### VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits with the following exceptions:

LCS ID	Date	Compound	%R	Associated Samples	Flag
2120162 BS1	12/9/02	Chlorodibromomethane 1,1,2-trichloroethane Trichlorofluoromethane	74.4 72.4 282	All in SDG	J (all detects) UJ (all non-detects)
2120162 BS2	12/9/02	Trichlorofluoromethane	346		

### IX. Regional Quality Assurance and Quality Control

Not applicable.

#### X. Internal Standards

All internal standard areas were below criteria in samples MP-SB-03-3840 and MP-SB-04-1820 all reported results in these samples are qualified "J" or "UJ".

Internal standard number 3 was below criteria in sample MP-SB-3-1820 all results quantitated off this standard are qualified "J" or "UJ" (bromodichloromethane, tetrachloroethene, 1,2-dibromoethane, chlorobenzene, ethylbenzene, xylenes, styrene, and bromoform).

The reanalysis of these samples confirmed internal standard areas observed in the initial analyses. The initial results were used for reporting.

### XI. Target Compound Identifications

All target compound identifications were within validation criteria for samples for all samples.

### XII. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria for all samples.

#### XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

### XIV. System Performance

The system performance was within validation criteria.

### XV. Overall Assessment of Data

Data flags have been applied to data reports and attached at the end of this report.

### XVI. Field Duplicates

Results for sample MP-SB-02-1416 and its duplicate MP-SB-D were reviewed and found to be comparable.

#### XVII. Additional Findings

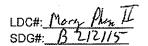
During review of the raw data the following items were noted:

- 1. Some target and surrogate areas were manually integrated but the integration details were not included in the report. The laboratory was contacted and supplied some clarification that included integration details.
- 2. The surrogate control limits reported on a form titles QA/QC Report did not match the limits given on the data report forms. The laboratory was contacted as to which control limits the data were evaluated against. The laboratory responded that the criteria listed on the data report forms were used for results analysis and the ones on the QA/QC report were generated for instrumentation review only.

The laboratory responses were satisfactory and are attached to report for SDG B212111. No action was required on the data.

Data Validation Checklist, Worksheets And Supplemental Information

### **VALIDATION FINDINGS CHECKLIST**



Page 1 of 2 Reviewer: 5 kinches

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
i. Technical holding times				
All technical holding times were met.	X			
Cooler temperature criteria was met.	Х			
II. GC/MS instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	X			
Were all samples analyzed within the 12 hour clock criteria?	X			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	义			
Were all percent relative standard deviations (%RSD) and relative response factors (RFF) within method criteria for all CCCs and SPCCs?	Х			
Was a curve fit used for evaluation? If yes, what was the acceptance criteria used?	X			140.99
Did the initial calibration meet the curve fit acceptance criteria?	Х			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) ≥ 0.05?		人		See Work short
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	X			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	Х.			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?		X		Sar world sheet
V. Blanks				
Was a method blank associated with every sample in this SDG?	X			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	入			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	X			See werk sheet
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	Х			
If the percent recovery (%R) for one of more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?				
VII. Matrix spike/matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in the SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.		X		Sc. 1 No Site spacifice ms/ms/ Analyzel.  Accordly to Run lay
Was a MS/MSD analyzed every 20 samples of each matrix?	X			According to Run lax

### **VALIDATION FINDINGS CHECKLIST**

LDC#: Mary Plus II SDG#: B212115

Page 2 of 2 Reviewer: 5. kirchy

Method: Volatiles (EPA SW 846 Method 8260B)

Method: Volatiles (EPA SW 846 Method 8260B)				
Were the MS/MSD percent recoveries (%R) and the relative				
percent differences (RPD) within the QC limits?			X	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	X			
Was an LCS analyzed per analytical batch?	义			
Were the LCS percent recoveries (%R) and relative percent				
difference (RPD) within the QC limits?	人			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		X_	·	
Were the performance evaluation (PE) samples within the			χ	
acceptance limits?			_ ^	
X. Internal standards				
Were internal standard area counts within -50% or +100% of		X		Ser work Sheet
the associated calibration standard?		/		Jer Work Thee!
Were retention times within +/- 30 seconds of the associated	X			- :
calibration standard?		\$7674698255555		111
XI. Target compound identification  Were relative retention times (RRTs) within +/- 0.06 RRT units				
of the standard?	人			
Did compound spectra meet specified EPA "Functional	<u> </u>			
Guidelines" criteria?	X			
Were chromatogram peaks verified and accounted for?	χ			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and				
relative response factor (RRF) used to quantitate the	X			·
compound?				
Were compound quantitation and CRQLs adjusted to reflect all	,			
sample dilutions and dry weight factors applicable to level IV	X			
validation?	900428800000000	800000000000000000000000000000000000000	100000000000000000000000000000000000000	
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?	X			·
Were relative intensities of the major ions within +/- 20%				
between the sample and the reference spectra?	(			
Did the raw data indicate that the laboratory performed a library				
search for all required peaks in the chromatograms (samples	X			
and blanks)?				
XIV: System performance				
System performance was found to be acceptable.				
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	X,			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.	.X	_JK-3C	gholor	
Target compounds were detected in the field duplicates.	X		-A22	Acetene a Melfor Chloride
XVII. Field blanks	V =		,	7
Field blanks were identified in this SDG.		又	and the second s	
Target compounds were detected in the field blanks.		, -	$\checkmark$	
	L	L	lacksquare	

# Crosswalk - Worksheet ID vs. Compound Name

Worksheet ID ซึ่ง	Compound Name	CAS No.	System Performance
A	Dichlorodifluoromethane	75-71-8	SPCC (%RSD)
В	Chloromethane	74-87-3	
С	VinylChloride	75-01-4	CCC (RRF)
D	Bromomethane	74-83-9	
E	Chloroethane	75-00-3	
F	Trichlorofluoromethane	75-69-4	
G	1,1-Dichloroethene	75-35-4	CCC (RRF)
Н	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	
1	Acetone	67-64-1	
J	CarbonDisulfide	75-15-0	
K	MethylAcetate	79-20-9	
È	MethyleneChloride	75-09-2	
M	trans-1,2-Dichloroethene	156-60-5	
N	tert-ButylMethylEther	1634-04-4	
0	1,1-Dichloroethane	75-34-3	SPCC (%RSD)
P	cis-1,2-Dichloroethene	156-59-2	
Q	2-Butanone	78-93-3	
R	Bromochloromethane	74-97-5	
S	Chloroform	67-66-3	CCC (RRF)
T	1,1,1-Trichloroethane	71-55-6	
Ü	Cyclohexane	110-82-7	
V	CarbonTetrachloride	56-23-5	
W	Benzene	71-43-2	
	1,2-Dichloroethane	107-06-2	
X Y	1	<del>~~~</del>	
	Trichloroethene	79-01-6	
Z	Methylcyclohexane	108-87-2	CCC (PPE)
AA .	1,2-Dichloropropane	78-87-5	CCC (RRF)
BB ✓		75-27-4	
CC	cis-1,3-Dichloropropene	10061-01-5	
DD	4-Methyl-2-pentanone	108-10-1	000 (000)
EE	Toluene	108-88-3	CCC (RRF)
FF	trans-1,3-Dichloropropene	10061-02-6	
GG	1,1,2-Trichloroethane	79-00-5	
	Tetrachloroethene ,	127-18-4	
<u> </u>	2-Hexanone	591-78-6	
IJ	Dibromochloromethane	124-48-1	
KK 🗸	1,2-Dibromoethane	106-93-4	
LL i/	Chlorobenzene	108-90-7	SPCC (%RSD)
MM v	Ethylbenzene	100-41-4	CCC (RRF)
NN 🗸	Xylenes(total)	1330-20-7	
00 🗸	Styrene	100-42-5	
PP 🗸	Bromoform	75-25-2	SPCC (%RSD)
QQ	Isopropylbenzene	98-82-8	-
RR	1.1,2,2-Tetrachloroethane	79-34-5	SPCC (%RSD)
SS	1,3-Dichlorobenzene	541-73-1	
TT	1,4-Dichlorobenzene	106-46-7	
ΰΰ	1,2-Dichlorobenzene	95-50-1	
W	1,2-Dibromo-3-chloropropane	96-12-8	
WW	1,2,4-Trichlorobenzene	120-82-1	
XX	1,2,4-Trichlorobenzene	87-61-6	
YY	1,4,7-1110:11010001120110	07-01-0	
ZZ		_	
AAA			
BBB		<del> </del>	
CCC			

TABLE V-1: VOLATILE ANALYSIS 8260B(DV-under EPA NFG)

CASE: Morey Phane II

SDG: BZ12/15 (+ BZ12/11)

Instrument ID: 62MS3 DATE ANALYZED: 12/4 BFB Tune OK? VES NO

	Hold	Time		,		_	1, 1; 11=<10%)				
			S	Surrogates			Internals				
Sample Number	Aro	All	1	2	3	4	1	2	3	4	
ChK											
ChK											
BLK											
B212111-03				,						<b>3</b> 55	
-01							1/2			13/2	
-02							4	4	<u> </u>	13/2	
B212110-01					ļ						
B212110-02					<u> </u>					3.4	
BZ12113-01							¥	*	<b>y</b>	سيطنه	
B212/15-01					ļ					مثلنه	
02 mu-u											
<u>03</u>						<b></b>				سبلد.	
04									ょ	1	
05					,		4	4	¥	X	
06 Necl-V					,		4	4	1	رطعي	
										<b></b>	
	1.	4									

LCS OK?

YES NO Comment:

		11/4 5						
	IC Dat	e: ++	CC Date:_	12-9	Resulting Action			
COMPOUND	< 0.05	> 30%	< 0.05	> 25%	"J", "UJ", "R" (Hit/Non-Detect)			
Brane malane		40.24		39.3	5/05			
Trichloroflurow Prese		37-79		62.4				
Aceter		62.22	, teresión,	64.5	<b>J</b>			
Totalydrahrane		37-91		70-1	NT			
4.41 · 0								
Dichlorodiflewomen				25-4	NT			
Carbon Disulfiel				43.0	5/00			
1,1,1-TCA				27.7				
Viole Acrash				54.7				
2-Actanom			0.014	73-1				
4-relly-2-Pentanene				74.4				
1,1,t-michlas There				27-4				
Litergrane				76-6				
1,3- Dich Compressione				32.0	NT			
chlevo di brone mellan				25-5	5/07			
Bonkon				34,4				
1.1,2,2 Tetrachlerofla	u			44.9	*1			

METHOD BLANK: 13 Acl	FIELD BLANK:	TRIP BLANK:	_ INT=
war since was a second and a second a second and a second a second and	**************************************	***************************************	- / nontinger
		***************************************	- Compositi
DV-worksheet-Method 8260B using calibration	criteria from CLP National Functional Guidel	lines for Organic Reveiw-1999	

TABLE V-1: VOLATILE ANALYSIS 8260B(DV-under EPA NFG)

CASE: Morry Phon II SDG: B2/2/15 (+B2/2/11)

Instrument ID: CCM5-3 DATE ANALYZED: 12/10 BFB Tune OK? (YES) NO

	ноја	Time	S	tand	dard	3: (	1, 1	; 11	=<109	៩)	
	/	TIMO	S	Surrogates				Internals			
Sample Number	Aro	A11	1	2	3	4	1	2	3	4	1
Ch4											
CKK BIK											1
BIK											
BZ12111-02 RE1											
BZ12115-04 RE(/						ļ			L	1	\
-05 REI							4	4	1	X.	V
-OC REI	<u> </u>		<u></u>				4	V	4	1/	
<del></del>	1/2			ļ	ļ						
	W										
14 W / 1/3"	<del> '</del>										
3	1/2						-				
V V V			<b></b>				1				
No // No cold	<del>/</del>		<b></b>	<del>                                     </del>							
			<b></b>	<b> </b>		<b></b>	1				
							$\parallel - \parallel$				
				<b> </b>		<u> </u>	1				

LCS OK?

YES NO Comment:

	IC Date	: 11/5	CC Date:		Resulting Action
COMPOUND	< 0.05	> 30%	< 0.05	> 25%	"J", "UJ", "R" (Hit/Non-Detect)
Bronemetres		40.24		39.5	Jlox
Trichlero fluorome Am		37-78		88.1	
Acetene		62.22		63.8	
Tetrahydroteran		37-91		63.5	J.
0					
Chloroform Chloroform				39.5	5/45
Carpon digulardy				34.0	
1,1,1-Trichloror Phane				41.5	
Vial Acetate				51.9	
2-Betanem			0.017	67.3	
Carbon totach lands				32.7	
Trichloroxthene				37.8	
4-reful-2-perference				68-7	
2-Hexanen				72.1	
XVInes				30.8	
Bremeferm				267	
1,1,2,2-Texachlorothan.				32-4	
			<b>t</b>		ب ا

METHOD BLANK: 13 Mill	FIELD BLANK:	TRIP BLANK:	INT.
ht <del>erottilististen til kalletin och stattetta sa</del>	**************************************	######################################	Compounds
DV-worksheet-Method 8260B using calibration	n criteria from CI P National Functional Guide	lines for Organic Reveius 1000	7 (614)

Qualified Data Reports



1380 Busch Parkway Buffalo Grove, Illinois 60089

Email: info@glalabs.com (847) 808-7766 FAX (847) 808-7772

CDM

125 S. Wacker Dr. Suite 600

Chicago IL, 60606

Project: Morey Phase II

Project Number: Morey P2
Project Manager: Mark Peters

Reported: 12/11/02 15:41

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID		Laboratory ID	Matrix	Date Sampled	Date Received
MP-SB-02-1416		B212115-01	Soil	12/06/02 09:15	12/06/02 17:20
MP-SB-02-6870		B212115-02	Soil	12/06/02 11:15	12/06/02 17:20
MP-SB-D	* *	B212115-03	Soil	12/06/02 09:20	12/06/02 17:20
MP-SB-03-1820		B212115-04	Soil	12/06/02 14:30	12/06/02 17:20
MP-SB-03-3840		B212115-05	Soil	12/06/02 14:35	12/06/02 17:20
MP-SB-04-1820	•	B212115-06	Soil	12/06/02 16:00	12/06/02 17:20

**MOR 08617** 

Great Lakes Analytical--Buffalo Grove

Andy Johnson

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1380 Busch Parkway Buffalo Grove, Illinois 60089 Email: info@glalabs.com (847) 808-7766 FAX (847) 808-7772

CDM

125 S. Wacker Dr. Suite 600

Chicago IL, 60606

Project: Morey Phase II

Project Number: Morey P2

Project Manager: Mark Peters

Reported: 12/11/02 15:41

# **General Chemistry**

# Great Lakes Analytical-Buffalo Grove

Analyte	Repo Result I	rting Limit Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MP-SB-02-1416 (B212115-01) Soil	Sampled: 12/06/02 09:15	Received: 12/	06/02 17:2	20			<del> </del>	<del>ng pangangan na</del>
pH	7.36	pH Units	1	2120220	12/11/02	12/11/02	EPA 9045C	
MP-SB-02-6870 (B212115-02) Soil	Sampled: 12/06/02 11:15	Received: 12/	06/02 17:2	20				
pH	7.83	pH Units	1	2120220	12/11/02	12/11/02	EPA 9045C	
MP-SB-D (B212115-03) Soil Samp	oled: 12/06/02 09:20 Rece	ived: 12/06/02	17:20					*
pH	8.04	pH Units	1	2120220	12/11/02	12/11/02	EPA 9045C	
MP-SB-04-1820 (B212115-06) Soil	Sampled: 12/06/02 16:00	Received: 12/	06/02 17:2	:0				
pH	8.03	pH Units	· · · · · · · · · · · · · · · · · · ·	2120220	12/11/02	12/11/02	EPA 9045C	***************************************

**MOR 08618** 

Great Lakes Analytical--Buffalo Grove

Andy Johnson

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Andy Johnson, Project Manager

Page 2 of 10



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#### 1380 Busch Parkway Buffalo Grove, Illinois 60089

Email: info@glalabs.com (847) 808-7766 FAX (847) 808-7772

CDM

125 S. Wacker Dr. Suite 600 Chicago IL, 60606 Project: Morey Phase II

Project Number: Morey P2
Project Manager: Mark Peters

Reported: 12/11/02 15:41

# Volatile Organic Compounds by EPA Method 5035/8260B Great Lakes Analytical--Buffalo Grove

Analyte	Result	Reporting Limit	and the second s	Dilution	Batch	Prepared	Analyzed	Method	Notes
MP-SB-02-1416 (B212115-01) Soil				/02 17:2	20	*************		***************************************	QC
Acetone	30.0	丁於 22.1 4.42	ug/kg dry	1	2120162	12/09/02	12/09/02	5035/8260B	A
Benzene	ND	4.42	n	**	11	ii ii	u,	n	
Bromodichloromethane	ND	4.42	я	H	, w	,,	18	ü	
Bromoform	ND 🗸		n	н .	.81	, to 10		Ħ	
Bromomethane	ND V		n	11	**	n u		n.	
2-Butanone	ALL KND-VJ	8:84-		H ·	. "	Ħ	#	Ĥ	
Carbon disulfide	ND UJ		B 1	1)	H	11	ti .	11	
Carbon tetrachloride	ND	4.42	**	н	18	31	Ħ	<b>31</b>	
Chlorobenzene	ND	4.42	н	Ü	#	. #	27		
Chlorodibromomethane	ND UJ	4.42	11	11	11	. 11	11	n	
Chloroethane	ND	4.42	H .	15	n	0	H <sub>1</sub>	u	1000
Chloroform	ND	4.42	n ·	ít.	н	n	**	N	
Chloromethane	ND	4.42	. #	**	tt.	11	u		
1,1-Dichloroethane	ND	4.42	II .	, st	11	u ·		19	
1,2-Dichloroethane	ND	4.42	ft.	11	**	n n	п	.1)	
1,1-Dichloroethene	ND	4.42	μ .	ŧŗ	ti	1)	11		
cis-1,2-Dichloroethene	ND	4.42	"	1)	ti .	11		1,5 m	
trans-1,2-Dichloroethene	ND	4.42	II .	**	11	N	n	H .	
1,2-Dichloropropane	ND	4.42	11	16	H.	**	17	H	
1,3-Dichloropropene (cis + trans)	ND	2.65	H <sub>i</sub>	11 .	n	W.	**	n	
Ethylbenzene	ND	4.42	11	0	и	H		.00	
2-Hexanone	ND UT	8.84	U	. 11	**		u ege	of the second	
Methylene chloride	ND	4.42	11	0 '	11	32	# · ·	υ.,	
4-Methyl-2-pentanone	ND UJ	8.84	n ·	. 11		11	ħ	n ·	
Styrene	ND	4.42	n		, n	11	11	11	
1,1,2,2-Tetrachloroethane	ND UJ	4.42	11	. 19,111	n.	11	tt-	n e	
Tetrachloroethene	ND	4.42	Ť	• •				H	
Toluene	ND	4.42	H .	11	11	· · · · · · · · · · · · · · · · · · ·	н	0.	
1,1,1-Trichloroethane	ND UJ	4.42	n		H .	. 11	v	11	
1,1,2-Trichloroethane	ND UJ		11	17	n'	. n	н	20	
Trichloroethene	ND	4.42	n	H	11	99	n	<b>n</b> (1997)	
Trichlorofluoromethane	ND UJ	4.42	n .	11	11	H	11	n	
Vinyl acetate	ND UJ	8.84	.01	. 11	и -		- 11	11	
Vinyl chloride	ND	4.42	**	11	19	n		n	
Total Xylenes	ND	8.84		tr	11	**	11	ii .	
Surrogate: Dibromofluoromethane		105 %	73.8-142	?	n .	. п	u u	····	<u> </u>
Surrogate: 1,2-Dichloroethane-d4		105 %	61.8-168		,,	#	i,	<b>"</b>	
Surrogate: Toluene-d8		96.4 %	70.1-131		n	,,	11	,,	
Surrogate: 4-Bromofluorobenzene		83.7%	66.3-119		. <i>n</i>	n ·	#		
		00.7 70	00,5-119					4 - 1	

**MOR 08619** 

Great Lakes Analytical--Buffalo Grove

Andy Johnson

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Email: info@glalabs.com (847) 808-7766 FAX (847) 808-7772

CDM

125 S. Wacker Dr. Suite 600 Chicago IL, 60606 Project: Morey Phase II

Project Number: Morey P2
Project Manager: Mark Peters

Reported: 12/11/02 15:41

# Volatile Organic Compounds by EPA Method 5035/8260B Great Lakes Analytical--Buffalo Grove

Analyte	Result	Reporting Limit		Dilution	Batch	Prepared	Analyzed	Method	Note
MP-SB-02-6870 (B212115-02) Soil						Tropared	Anatyzeu	IMENIOG	Q
Acetone	27.2 J	21.7	*****		<del></del>				
Benzene	27.2 J ND	4.35	ug/kg dry	1	2120162	12/09/02	12/09/02	5035/8260B	
Bromodichloromethane	ND	4.35		10	н .		11	e in the second	
Bromoform	ND VJ			11	"	n	,,	er e	
Bromomethane	ND UJ		n n		"		11	n	
2-Butanone	THE RID W	, 4.33 		11	19	D	11	,	
Carbon disulfide	MA ND UJ		"	n ·	**	11	11	a a	
Carbon tetrachloride	ND	4.35	11	#	н .	**			
Chlorobenzene	ND	4.35	11	11	49	u	n	11	
Chlorodibromomethane	ND UJ	4.35		11	11	11	**	) i	
Chloroethane	ND ND	4.35	ti .	O,		п	· a	#	
Chloroform	ND	4.35	· · · · · · · · · · · · · · · · · · ·	11	**	. บ.	н.	11	
Chloromethane	ND	4.35	н	11	,,	.11	11		
1,1-Dichloroethane	ND	4.35		11	11	27	3 B 3	: в	
1,2-Dichloroethane	ND	4.35	11	H ·	н .	b		11	
1,1-Dichloroethene	ND	4.35	11	н	. 19	H		n	
cis-1,2-Dichloroethene	ND	4.35	#	n		11	1)	r . II	
trans-1,2-Dichloroethene	ND	4.35	11	H	u		H .	n	
1,2-Dichloropropane	ND	4.35	- 10		н	11		n .	
1,3-Dichloropropene (cis + trans)	ND	2.61	11	H	lt .		17	n	
Ethylbenzene	ND	4.35	n ·	in	.11	u u	3 H .	<b>11</b> ··	
2-Hexanone	ND UJ	8.69	#	11	11	. ,			
Methylene chloride	4.89 U	4.35	n	n		· ir	11:	<b>81</b>	В,А
4-Methyl-2-pentanone	ND UJ	8.69	ts	#	IF	<b>8</b>	11	in ·	<i>D</i> ,A
Styrene	ND	4.35	11	11	ŧ	. 17		· ·	
1,1,2,2-Tetrachloroethane	ND UJ	4.35	n	11	16	н	n ·	ii.	
Tetrachloroethene	ND	4.35	11-	11	11	11	н .	n	
Γoluene	ND	4.35	n	11	. 11	н	11	pr .	
,1,1-Trichloroethane	ND J	4.35	H	,11	11	ii .	11		
,1,2-Trichloroethane	ND US	4.35	19	19 -		n n	'n	n	
Frichloroethene	ND	4.35	11	и	10	n	ti	ı ı	
richlorofluoromethane	ND UJ	4.35	и .	11	Ü	29	н	**	
/inyl acetate	NDUJ	8.69	H	12		.11			
/inyl chloride	ND	4.35		31	n	11	11	***	
Total Xylenes	ND	8.69	n ·	H*	H	11	ii	0	
urrogate: Dibromofluoromethane	****	106%	73.8-14	12	n	ıı .	r,	n	
Surrogate: 1,2-Dichloroethane-d4		105 %	61.8-16		u	#	n	#	
urrogate: Toluene-d8		101%	70.1-13		.0	<i>n</i>	"	, "	
urrogate: 4-Bromofluorobenzene		93.6 %	66.3-11		н	,,	gr ·	· W	

Great Lakes Analytical--Buffalo Grove

Andy Johnson

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CDM

125 S. Wacker Dr. Suite 600 Chicago IL, 60606 Project: Morey Phase II

Project Number: Morey P2
Project Manager: Mark Peters

Reported: 12/11/02 15:41

# Volatile Organic Compounds by EPA Method 5035/8260B

Great Lakes Analytical--Buffalo Grove

Analyte		Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MP-SB-D (B212115-03) Soil	Sampled: 1	2/06/02 09:20	Received:	12/06/02 1	7:20					QC
Acetone		29.3 🦵		ug/kg dry	1	2120162	12/09/02	12/09/02	5035/8260B	A
Benzene		ND	5.13	и	. 10	n	n	н	ir ir	
Bromodichloromethane		ND	5.13	n .	Ħ.	n	.H	11	. н	
Bromoform		ND UJ	5.13	18	u "	PF .	n	n	n	
Bromomethane		ND UJ	5.13	н	u	p	ų	· ·	11	
2-Butanone	9/4	GR ND Ly		. "	ii ii	11	11	n	u	
Carbon disulfide		ND UJ	5.13	H	11	. 11	H	.0	a' ''	
Carbon tetrachloride		ND	5.13	93	11	11	# .	ú	<b>83</b> °	
Chlorobenzene		ND	5.13	11	H :	19	,* <b>H</b>	i u	н ′	
Chlorodibromomethane		ND UJ	5.13	, н	**		a a	n	и *	
Chloroethane		ND	5.13	"	11	ti	n '	н	u	
Chloroform		ND	5.13	11	**	"		υ	n.	
Chloromethane		ND	5.13	- 11	1 11	er -	j e o	35 m 33	n "	and the second
1,1-Dichloroethane		ND	5.13	11	e	**	· , u · ·	n		
1,2-Dichloroethane		ND	5.13	11	) I	n		n .		
1,1-Dichloroethene		ND	5.13	11	**	11	12		n	
cis-1,2-Dichloroethene		ND	5.13	n	п		w	.,		
trans-1,2-Dichloroethene		ND	5.13	11	н	tr	н	**	11	*
1,2-Dichloropropane		ND	5.13	#	11	tr .	11	**	1#	
1,3-Dichloropropene (cis + trans)		ND	3.08	ti j	19	11		i - n	21	
Ethylbenzene		ND	5.13	1f	11	11		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	at the state of th	
2-Hexanone		ND UJ		Ħ	19	11	***		ti .	2 - 1.5
Methylene chloride		ND ND	5.13	**	**	51	•	**	H	
4-Methyl-2-pentanone		ND UJ	10.3	19	. #1	н			.,	
Styrene Styrene		ND OJ	5.13							
1,1,2,2-Tetrachloroethane		ND UJ		11	"	,				
Tetrachloroethene										
Toluene		ND	5.13	11	11		n	. 11		
		ND	5.13	n ·	"		Ħ	Ħ		
1,1,1-Trichloroethane		ND UJ	5.13			#	n	n	n	
1,1,2-Trichloroethane		ND W	5.13	11	n	H -	D	. "	# .	
Trichloroethene		ND	5.13	ii .	"	tr .	Ħ	#		
Trichlorofluoromethane		NDUJ	5.13	A .	"		tt	u u		
Vinyl acetate		ND W	10.3	ti .	17	. 11	11	**	'n,	
Vinyl chloride		ND	5.13	H	. 17	9	tt	ii.	# 1	
Total Xylenes		ND	10.3	11	***	n	If	11	Ħ	
Surrogate: Dibromofluoromethan	e		106 %	73.8-14	12	и		. 11	<i>n</i>	
Surrogate: 1,2-Dichloroethane-d4			106%	61.8-16	8	"	Ü	n	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Surrogate: Toluene-d8			99.2 %	70.1-13		#	"	"		
Surrogate: 4-Bromofluorobenzene	<b>&gt;</b>		88.9 %	66.3-11		. "	·	"		

Great Lakes Analytical--Buffalo Grove

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Andy Johnson





1380 Busch Parkway Buffalo Grove, Illinois 60089



Email: info@glalabs.com (847) 808-7766 FAX (847) 808-7772

CDM

125 S. Wacker Dr. Suite 600 Chicago IL, 60606 Project: Morey Phase II

Project Number: Morey P2
Project Manager: Mark Peters

Reported: 12/11/02 15:41

# Volatile Organic Compounds by EPA Method 5035/8260B

# Great Lakes Analytical--Buffalo Grove

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MP-SB-03-1820 (B212115-04) Soil	Sampled: 12/06/02 14	4:30 Rec	eived: 12/	06/02 17:2	20				QC,02
Acetone	38.4 ブ		ug/kg dry	1	2120162	12/09/02	12/09/02	5035/8260B	Þ
Benzene	ND	3.92	11,	; "	11	н.	и,		111
Bromodichloromethane	ND	3.92	n	11		**		H	e entrat
Bromoform	NDUJ	3.92	11	it .	**	ü		in in	
Bromomethane	NDW	3.92	H	t#	H .	11	н.	++	
2-Butanone	RNDW	7.8 <del>5</del>	ni -	n	11	11	11		
Carbon disulfide	The ND UT	3.92	It	ni.	<b>37</b>		j. 11	. <b>B</b>	*
Carbon tetrachloride	ND	3.92	. 11	19	Ħ		; H	, Ú x	*
Chlorobenzene	ND VJ	3.92		Ħ	H		n	H <sub>1</sub> are set	
Chlorodibromomethane	NDUJ	3.92	Ħ	19	n .	11		u .	
Chloroethane	ND	3.92	. #	11	**	"	11	**	. 1.
Chloroform	ND	3.92	11	11 .		11		1 W	
Chloromethane	ND	3.92	# .	tt	н	11	ft	Ħ	
1,1-Dichloroethane	ND	3.92	11	U	'n	11	n '	n	
1,2-Dichloroethane	ND	3.92	n	н		H .	er .	n	
1,1-Dichloroethene	ND	3.92	n	1)	Ð		11	н	
cis-1,2-Dichloroethene	ND	3.92	n	H .	11	H-	и.,	14	
trans-1,2-Dichloroethene	ND	3.92	11	11		11	u,	n	
1,2-Dichloropropane	ND	3.92	41	II	19	11	11	ti .	
1,3-Dichloropropene (cis + trans)	ND	2.35	11	**	ŧŧ	11		11	
Ethylbenzene	ND UJ	3.92	16		11	10	10		
2-Hexanone	ND UJ	7.85		**	11	11	11	• • • • • • • • • • • • • • • • • • •	
Methylene chloride	ND	3.92	15						
4-Methyl-2-pentanone	ND UJ	7.85	17		11	"	n		
Styrene	ND UJ	7.83 3.92			11	"			
1,1,2,2-Tetrachloroethane	ND UJ		# #	11	. "		"	U	
Tetrachloroethene		3.92	. 11				11		
Toluene	ND W	3.92		11	11	11	"	, , , , , , , , , , , , , , , , , , , ,	
	ND .	3.92	#		. *1	n.	н	0	
1,1,1-Trichloroethane	ND UT	3.92	n	u 	11	in .	er .	11	
1,1,2-Trichloroethane	ND W	3.92	n		17	**	i,	H	
Trichloroethene	ND	3.92	Ð		ti .		Ħ	P	
Trichlorofluoromethane	NDUT	3.92	11	11	. #	11	Ħ	. 11	
Vinyl acetate	ND W	7.85	11	H	я.	"	!!	11.	
Vinyl chloride	ND	3.92	tf .	n	11	11	11	n ,	
Γotal Xylenes	ND UJ	7.85	11	1)		n .	11	1)	
Surrogate: Dibromofluoromethane		111%	73.8-1	12	"	ø	11	11.	
Surrogate: 1,2-Dichloroethane-d4		114%	61.8-1	58	"	D <sub>c</sub>	"	n .	
Surrogate: Toluene-d8		95.9%	70.1-1.		tt	· #	<i>n</i> .	n	
Surrogate: 4-Bromofluorobenzene		79.8 %	66.3-1		11	"	#	n	

Great Lakes Analytical--Buffalo Grove

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Andy Johnson, Project Manager

MOR 08622

Page 6 of 10



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CDM

125 S. Wacker Dr. Suite 600 Chicago IL, 60606 Project: Morey Phase II Project Number: Morey P2 Project Manager: Mark Peters

Reported: 12/11/02 15:41

# Volatile Organic Compounds by EPA Method 5035/8260B Great Lakes Analytical--Buffalo Grove

			Reporting							
	Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	MP-SB-03-3840 (B212115-05) Soil	Sampled: 12/06/02	2 14:35 Rec	eived: 12/	06/02 17:2	20				QC,O2
	Acetone	45.6 J		ug/kg dry	1	2120162	12/09/02	12/09/02	5035/8260B	A
	Benzene	ND U	J 4.52	"	**	Ħ	n	n	ii	
	Bromodichloromethane	ND	4.52	11	10	er .	x1 ,	H	n	
	Bromoform	ND	4.52	tr .	2)	11	**		n	
	Bromomethane	ec ND	4.52	я	11	ìı	n 5	н	. 41	
	2-Butanone	The RND	9.04		<b>11</b>	Ħ ·	<b>!!</b> .	, tr	Ħ	
	Carbon disulfide	" ND	4.52	n .	Ð	11	11	n	pr "	•
	Carbon tetrachloride	ND	4.52	**	11	11	. ft	tt .	. "	
	Chlorobenzene	ND	4.52	n .		#		. n .	ii	
	Chlorodibromomethane	ND	4.52	11	11	11	91	u u u		
	Chloroethane	ND	4.52	34	н .	, D	"	н	11	
	Chloroform	ND	4.52	11	, n .	11	Ü	n .	n e	
	Chloromethane	ND	4.52	H	ft, , ,	H	II.	u	11	
	1,1-Dichloroethane	ND	4.52	11	19	"	11	n	n	
	1,2-Dichloroethane	ND	4.52	н	11	0 -	. 5 T. <b>B</b>	11	n ·	
	1,1-Dichloroethene	ND	4.52	15	ir .	ŧŧ	, "	11	11	
	cis-1,2-Dichloroethene	ND	4.52	11	11	ø	. 17	11	H	-
	rans-1,2-Dichloroethene	ND	4.52	11	11	11		17	**	
	1,2-Dichloropropane	ND	4.52	17	11	15	n :	er '	··· In	
	1,3-Dichloropropene (cis + trans)	ND	2.71	11	н .	**	11	n .	11.	
	Ethylbenzene	ND	4.52	H .	**	U	11	н	n	
	2-Hexanone	ND	9,04	n	11	. #	н .	н ,	n	
	Methylene chloride	ND	4.52	11	n	W,	11	ј., "и " . " .	17	
4	-Methyl-2-pentanone	ND	9.04	. Př	11	11	n	, w	n	
	Styrene	ND	4.52	Br .	57	#	Ħ	u	e e e	
1	,1,2,2-Tetrachloroethane	ND	4.52	#1	, n .	11	n	er n	e e e	
	etrachloroethene	ND	4.52	n	tt .	н	**	n	n.	
7	Coluene	ND	4.52	ff -	н				n n	
1	,1,1-Trichloroethane	ND	4.52	17 .	n	)1	u ,	<b>n</b> , ,	· u	
1	,1,2-Trichloroethane	ND	4,52	11	Ħ	n	. 10 1	ti .	i i e	
7	richloroethene	ND	4.52	#	m _	**			i di	
1	richlorofluoromethane	ND	4.52	,,	br	n	19	н		
V	'inyl acetate	ND	9.04	19	***	n	n	1 <b>u</b> - 1 1	10	
V	inyl chloride	ND	4.52	**	tt.	12	,,	H	er ,	
T	otal Xylenes	ND +	9.04	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	.0	н	u ·	. #	ft.	
-	urrogate: Dibromofluoromethane		106 %	73.8-1	42	"	"	"	и.	
	urrogate: 1,2-Dichloroethane-d4		112 %	61.8-1		. #		#	"	
	urrogate: Toluene-d8		89.6%	70.1-1		"	ii	,,	#	
	urrogate: 4-Bromofluorobenzene		83.0 %	66.3-1		,,	,,	y	,,	
~			05.0 70	00.3-1	17	**		. **	•	

Great Lakes Analytical--Buffalo Grove

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CDM

125 S. Wacker Dr. Suite 600

Chicago IL, 60606

Project: Morey Phase II

Project Number: Morey P2

Project Manager: Mark Peters

Reported: 12/11/02 15:41

# Volatile Organic Compounds by EPA Method 5035/8260B

### Great Lakes Analytical-Buffalo Grove

Analyte	1,		Result		eporting Limit		Dilution	Batch	Prepared	Analyzed	Method	Note
MP-SB-04-1820 (B212115	-06) Soil	Sampl				ceived: 12/0						QC,0:
Acetone			48.5		23.9	ug/kg dry	1	2120162	12/09/02	12/09/02	5035/8260B	
Benzene			ND	45	4.77	"	11	#1	is	n	ti i	•
Bromodichloromethane			ND	1	4.77	ti-	n	n	u u	Ħ .	Ħ	
3romoform			ND	- 1	4.77	п	n	н	u .	n	1000	,
3romomethane			ND		4.77	# 1	11				<b>11</b> (2) (2) (3)	
-Butanone		9/4	RAD		9:54		ni i	\$#	tt	. 11	n	
Carbon disulfide		4140	ND		4.77	H. +	. 19	li i	11		11	
Carbon tetrachloride			ND		4.77	Ħ	h	9	· · · · · ·	"	11	
Chlorobenzene			ND		4.77	1)	**	IF.		11	0	
Chlorodibromomethane			ND	ĺ	4.77	11	. 11	19	f1	. " "	**	
Chloroethane			ND		4.77	· · · · · · · ·	ú	Ħ	ti	, и	n	
Chloroform			ND		4.77	. 11	19	11	<b>H</b>	<b>10</b>		
Chloromethane			ND		4.77	e e	11	n	n	11	· · ·	
,1-Dichloroethane			ND		4.77	· u		31	11	**	11	
,2-Dichloroethane			ND		4.77	II .	11		31	u	<b>u</b> 1	
,1-Dichloroethene			ND		4.77	11	16	н	. 11		u,	
is-1,2-Dichloroethene			ND	-	4.77	11		н	**	#		
ans-1,2-Dichloroethene			ND	1	4.77	<b>u</b>	н	11	11	n	ú	
,2-Dichloropropane			ND		4.77	- 81	11	11	11		. 31	
,3-Dichloropropene (cis + ti	rans)		ND	1	2.86		u	11	**	n n	n.	
thylbenzene			ND	1 .	4.77	11		**	11	19	# 1	
-Hexanone				J.	9.54	11	**	31	11	н .		
Tethylene chloride			6.52		4.77	11	11	. ,,	**	ii ii	n	A,B
-Methyl-2-pentanone			ND		9.54		11		. ' #	Ħ		Λ,μ
tyrene			ND		4.77	11	11				n	
1,2,2-Tetrachloroethane			ND		4.77	- 11		er.	**		11	
etrachloroethene			ND		4.77			,,	п	11		
oluene			ND ND	. ]	4.77	"	17		11			
1,1-Trichloroethane			ND	1	4.77	11		1)	#	n		
1,2-Trichloroethane			ND	:	4.77	11		H				
richloroethene			ND ND	-		e e	11		11	11	v	
richlorofluoromethane					4.77	11	19	# · ·				
inyl acetate			ND	1	4.77	# . H	31	11	. 11	"	R	
inyl acetate			ND		9.54	H	# #	11	**	n	**	*
			ND	1.	4.77	Ħ	11	"	, <sub>tt</sub>	n n	# #	
otal Xylenes		er egyeletereletekken eleksys.	ND	¥	9.54				***			
ırrogate: Dibromofluorome					116%	73.8-14		, "	II .	"	#	
ırrogate: 1,2-Dichloroethar	ne-d4				117%	61.8-16		n	"	"	n	
ırrogate: Toluene-d8					88.5 %	70.1-13		, <i>n</i>	. "	"	и	
rrogate: 4-Bromofluorober	nzene				76.5 %	66.3-11	9.		n	#	H	

Great Lakes Analytical--Buffalo Grove

Andy Johnson

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MOR 08624

Andy Johnson, Project Manager

Page 8 of 10

# CDM Data Validation Report

Project/Site Name:

Morey Phase II

**Collection Date:** 

December 09, 2002

**CDM Report Date:** 

September 19, 2005

Matrix:

Soil

Parameters:

Volatiles

Validation Level:

Level IV

Laboratory:

Great Lakes Analytical

Sample Delivery Group (SDG):

B212131

# Sample Identification

Site ID	<u>Lab ID</u>
MP-SB-04-3840	B212131-01
MP-SB-05-0507	B212131-02
MP-SB-05-3537	B212131-03
MP-SB-05-3840	B212131-04
MP-SB-06-1820	B212131-05
MP-SB-06-3840	B212131-06

#### Introduction

This data review covers 6 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

Data qualifiers were added as appropriate to a copy of the data reports. These modified data reports are provided at the end of this report.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

The following are definitions of the data qualifiers:

- U Indicates the compound was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

### I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

#### II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

#### III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 15.0% for each individual compound and less than or equal to 30.0% for calibration check compounds (CCCs).

In the case where %RSD was greater than 15.0%, the laboratory used a calibration curve to evaluate the compound. All coefficients of determination  $(r^2)$  were greater than or equal to 0.990.

For the purpose of technical evaluation, all compounds were evaluated against the 30.0% (%RSD) and 0.05 relative response factor (RRF) National Functional Guideline criteria. All compounds were within the validation criteria with the following exceptions:

Date	Compound	%RSD	Associated Samples	Flag	RRF
11/5/02 GCMS-3	Bromomethane Trichlorotrifluoromethane	40.24 37.78	Initial analysis of all samples	J (all detects)	
12/6/02 GCMS-1	Acetone Acetone Methylene chloride Carbon tetrachloride 2-Hexanone	62.22 67.3 35.3 46.99 40.19	Reanalysis of MP-SB-04-3840 MP-SB-05-3537 MP-SB-05-3840 MP-SB-06-1820 MP-SB-06-3840	J (all detects)	
11/8/02 GCMS-4	Bromomethane Acetone Methylene chloride 2-Butanone Bromoform 1,1,2,2-Tetrachloroethane	32.4 110 118 53.0 38.7 35.4	Dilution of MP-SB-05-0507 for Tetrachloroethene	Not applicable	

Average relative response factors (RRF) for all volatile target compounds and system performance check compounds (SPCCs) were within method and validation criteria.

### IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs).

For the purpose of technical evaluation, all compounds were evaluated against the 25.0% (%D) and 0.05 RRF National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	RRF
12/10/02	Bromomethane	37.6	MP-SB-04-3840	J (all detects)	
GCMS-3	Trichlorotrifluoromethane	82.9	MP-SB-05-0507	UJ (all non-detects)	
	Acetone	68.9	MP-SB-05-3537	·	
	Carbon disulfide	40.3	MP-SB-05-3840		
	1,1,1-Trichloroethane	26.5	MP-SB-06-1820		
	Vinyl acetate	56.3	MP-SB-06-3840		
	2-Butanone	73.1			
	4-methyl-2-pentanone	74.9			
	1,1,2-Trichloroethane	32.0			
	2-Hexanone	77.7			
	Chlorodibromomethane	32.5		-	
	Bromoform	40.8			
	1,1,2,2-tetrachloroethane	45.9			
12/11/02	Acetone	63.4	MP-SB-04-3840-RE1		
GCMS-1	Carbon disulfide	31.1	MP-SB-05-3537-RE1		
	1,1-Dichloroethane	33.4	MP-SB-05-3840-RE1	,	
	Vinyl acetate	32.0	MP-SB-06-1820-RE1	·	
	2-Butanone	43.6	MP-SB-06-3840-RE1		
	4-Methyl-2-pentanone	53.9			
	2-Hexanone	55.1			
12/11/02	Bromomethane	40.5	MP-SB-05-0507-DL	Not applicable	
GCMS-4	Acetone	71.4	Diluted for		
-	Methylene chloride	54.2	Tetrachloroethene		
	2-Butanone	61.4			
	Dichlorodifluoromethane	46.5			
	Vinyl chloride	28.2			
	Carbon disulfide	47.0			
	Vinyl acetate	40.9			
	4-Methyl-2-petanone	51.7			
	2-Hexanone	53.8			

#### V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Analysis Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
2120209-blk1	12/10/02	Methylene chloride	11.01	All

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
No sample			
results affected			

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were either not detected or were significantly greater (> 10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated field blanks with the following exceptions:

There were no field blanks associated with the samples contained in this SDG.

### VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. Surrogate recoveries for reanalyses of samples MP-SB-04-3840, MP-SB-05-3537 and MP-SB-06-1820 (used for reporting) had low recoveries. All results in these samples are qualified as estimated "J" or "UJ".

### VII. Matrix Spike/Matrix Spike Duplicates

No matrix spike analysis was associated with the samples reported in this SDG.

### VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits with the following exceptions:

LCSID	Date	Compound	%R	Associated Samples	Flag
2120209 BS1	12/10/02	Dibromochloromethane Trichlorofluoromethane	78.6 262	All in SDG	J (all detects) UJ (all non-detects)
2120209 BSD1		Dibromochloromethane Trichlorofluoromethane Bromoform 1,2-Dichloroethane 1,1,2,2-Terachloroethane 1,1,2-Trichloroethane	72.8 332 59.2 80.4 54.0 67.8		

### IX. Regional Quality Assurance and Quality Control

Not applicable.

#### X. Internal Standards

All internal standard areas were below criteria in sample MP-SB-05-3840 all reported results in this sample are qualified "J" or "UJ". The reanalysis of this sample confirmed internal standard areas observed in the initial analyses. The initial results were used for reporting.

The initial analysis of samples MP-SB-04-3840, MP-SB-05-3537, MP-SB-06-1820 and MP-SB-06-3840 had low internal standard recoveries. The reanalysis of these samples had improved internal standard recoveries. Therefore the reanalyses were used for reporting.

### XI. Target Compound Identifications

All target compound identifications were within validation criteria for samples for all samples.

### XII. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria for all samples.

### XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

### XIV. System Performance

The system performance was within validation criteria.

### XV. Overall Assessment of Data

Data flags have been applied to data reports and attached at the end of this report.

### XVI. Field Duplicates

No field duplicated was associated with this SDG.

### XVII. Additional Findings

During review of the raw data the following item was noted:

1. Some target and surrogate areas were manually integrated but the integration details were not included in the report. The laboratory was contacted and supplied some clarification that included integration details.

The laboratory response was satisfactory and is attached to report for SDG B212111. No action was required on the data.

Data Validation Checklist, Worksheets And Supplemental Information

### VALIDATION FINDINGS CHECKLIST

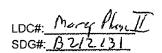
LDC#: More flon # SDG#: B212131

Page 1 of 2 Reviewer: 5. Kirchae-

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
Technical holding times				
All technical holding times were met.	X			
Cooler temperature criteria was met.	X			
II. GC/MS Instrument performance check				
Were the BFB performance results reviewed and found to be			3.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5	
within the specified criteria?	X			
Were all samples analyzed within the 12 hour clock criteria?	X			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	X			
Were all percent relative standard deviations (%RSD) and relative response factors (RFF) within method criteria for all CCCs and SPCCs?	Х			
Was a curve fit used for evaluation? If yes, what was the acceptance criteria used?	Х			121 0.99
Did the initial calibration meet the curve fit acceptance criteria?	Х			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) ≥ 0.05?		X		See worksheet
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	义			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	L			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?		X		Sin Work sheet
V. Blanks				
Was a method blank associated with every sample in this SDG?	X			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	メ			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	乂			Sur Workshort
VI. Surrogate spikes				
Were all surrogate %R within QC limits?		义		
If the percent recovery (%R) for one of more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?	Х			in rundysis - Son woodesta
			1	1
VII: Matrix spike/matrix spike duplicates  Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in the SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.		×		No Site Sparific Soil Mossman analyzand
Was a MS/MSD analyzed every 20 samples of each matrix?	Χ			Accordy to Ren log

### **VALIDATION FINDINGS CHECKLIST**



Page 2 of 2 Reviewer: 5-ki-ch-n

Method: Volatiles (EPA SW 846 Method 8260B)

Method: Volatiles (EPA SW 846 Method 8260B)				
Were the MS/MSD percent recoveries (%R) and the relative			,	
percent differences (RPD) within the QC limits?			X	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	又			
Was an LCS analyzed per analytical batch?	文			
Were the LCS percent recoveries (%R) and relative percent		. ,		C 1
difference (RPD) within the QC limits?		X		See World Shoot
IX Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?	l .	义		
Were the performance evaluation (PE) samples within the			,	
acceptance limits?			X	
X. Internal standards				
Were internal standard area counts within -50% or +100% of		J.		5 11 11 (1 )
the associated calibration standard?		义		Siz Wark Shir
Were retention times within +/- 30 seconds of the associated	1			
calibration standard?	X			
XI, Target compound identification	23.00			
Were relative retention times (RRTs) within +/- 0.06 RRT units	X			
of the standard?				
Did compound spectra meet specified EPA "Functional	( )			
Guidelines" criteria?	X			
Were chromatogram peaks verified and accounted for?	A 100 CONTRACTOR 100	an excitentation	2600 (2000) (2000)	
XII. Compound quantitation/GRQLs		2007/2007		
Were the correct internal standard (IS), quantitation ion and				
relative response factor (RRF) used to quantitate the	X			
compound?				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV	X			·
validation?	1			
XIII: Tentatively identified compounds (TICs)	2000000			
Were the major ions (> 10 percent relative intensity) in the	Aller San Designation	***************************************	4,74-704,774-44	
reference spectrum evaluated in sample spectrum?				
Were relative intensities of the major ions within +/- 20%	.,			
between the sample and the reference spectra?	X			
Did the raw data indicate that the laboratory performed a library				
search for all required peaks in the chromatograms (samples	人			
and blanks)?				
XIV. System performance				
System performance was found to be acceptable.	X			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	Х			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.	1/2X	Χ		
Target compounds were detected in the field duplicates.		/-	λ	
XVII. Field blanks			3 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	
Field blanks were identified in this SDG.	270,000,000	X		
Target compounds were detected in the field blanks.				
ranger compounds were detected in the neid blanks.		<u> </u>	X	

Crosswalk - Worksheet ID vs. Compound Name

D 753	Compound Name	CAS No.	System Performance
A	Dichlorodifluoromethane	75-71-8	SPCC (%RSD
В	Chloromethane	74-87-3	31° CO (781CD)
C	VinylChloride		CCC (RRF)
	Bromomethane	75-01-4	CCC (RRF)
<u>D</u>		74-83-9	
E	Chloroethane	75-00-3	
F	Trichlorofluoromethane	75-69-4	OCC (DDE)
G	1,1-Dichloroethene	75-35-4	CCC (RRF)
H	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	
<u> </u>	Acetone	67-64-1	
J	CarbonDisulfide	75-15-0	
K	MethylAcetate	79-20-9	
<u>L</u>	MethyleneChloride	75-09-2	
M	trans-1,2-Dichloroethene	156-60-5	
N	tert-ButylMethylEther	1634-04-4	
0	1,1-Dichloroethane	75-34-3	SPCC (%RSD
Р	cis-1,2-Dichloroethene	156-59-2	
Q	2-Butanone	78-93-3	
R	Bromochloromethane	74-97-5	
S	Chloroform	67-66-3	CCC (RRF)
T	1,1,1-Trichloroethane	71-55-6	
U	Cyclohexane	110-82-7	
V	CarbonTetrachloride	56-23-5	
W	Benzene	71-43-2	
X	1,2-Dichloroethane	107-06-2	
Y	Trichloroethene	79-01-6	
Z	Methylcyclohexane	108-87-2	
AA	1,2-Dichloropropane	78-87-5	CCC (RRF)
BB 🗸		75-27-4	
CC	cis-1,3-Dichloropropene	10061-01-5	
DD	4-Methyl-2-pentanone	108-10-1	
EE	Toluene	108-88-3	CCC (RRF)
FF	trans-1,3-Dichloropropene	10061-02-6	333 ()
GG	1,1,2-Trichloroethane	79-00-5	
HH 🗸		127-18-4	
	I		
11	2-Hexanone	591-78-6	
JJ	Dibromochloromethane	124-48-1	
	1,2-Dibromoethane	106-93-4	CDCC (0/ DCD
	Chlorobenzene	108-90-7	SPCC (%RSD
	Ethylbenzene	100-41-4	CCC (RRF)
	Xylenes(total)	1330-20-7	
	Styrene	100-42-5	
PP ✓	Bromoform	75-25-2	SPCC (%RSD)
QQ	Isopropylbenzene	98-82-8	
RR	1,1,2,2-Tetrachloroethane	79-34-5	SPCC (%RSD
SS	1,3-Dichlorobenzene	541-73-1	
TT	1,4-Dichlorobenzene	106-46-7	
UU	1,2-Dichlorobenzene	95-50-1	
W	1,2-Dibromo-3-chloropropane	96-12-8	
WW	1,2,4-Trichlorobenzene	120-82-1	
	1,2,4-Trichlorobenzene	87-61-6	
XX		<del></del>	
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XX YY ZZ			
YY ZZ			
ΥΥ			

CASE: Morey Phase II SDG: BZ/2/31

Instrument ID: GEM5-3 DATE ANALYZED: 12/10 BFB Tune OK? YES NO

	Hold	Hold Time		stand	dards	3: (	1,	; 11	=<10	б)
			S	Surro	ogate	es		Inte	rnal	s
Sample Number	Aro	All	1	2	3	4	1	2	3	4
2120209-6111										
2120209 - BS 1 2120209 - BS 0 1										
2120209-8501					ŝ					
B212131-01							1	1	4	Æ.
-02				<u> </u>	<u> </u>				<u> </u>	
-03			ļ	ļ	1		4		4	
-04			ļ		11111		14	4	V	Ł
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			ļ	ļ			ļ	ļ	<b> </b>	<u> </u>
S/MSD OK? YES NO Comment:	<u> </u>	<u> </u>	<u> </u>				<u></u>	<u></u>		<u> </u>

LCS OK?

YES (NO) Comment: JJ-78.6% L; F-262% 1; BSD-1 PP-5-8.2% L; SJ-72.8% L

IC Date: 11/5/02 CC Date: 12/10 F-332% T Resulting Action "J", "UJ", "R" > 25% COMPOUND < 0.05 > 30% < 0.05 (Hit/Non-Detect) 40.24 5/05 Brokemeliane 37.6 Trichlorofleore me have 82.9 37.78 Actor 68.9 62.22 37.91 NT 97.9 NT Carpon DisulRade 5/05 40.3 11,1-Trichlowor Prane 26.5 56.3 73.1 Dibromone Prane 30,4 NT 4-mely -2- pertanone 5/05 74.9 32.0 77.7 AT 3-Dichloropropane J/03 32.5 Chlora di bromene Mane 27.1 Brome form 40,8 45.9

METHOD	BLANK:	BUK	RL
	(Arti	re-5.7	7)
_	MCl	11.01	

FIELD BLANK:\_

TRIP BLANK:

/NT = nontarget confounds

DV-worksheet-Method 8260B using calibration criteria from CLP National Functional Guidelines for Organic Reveiw-1999

**MOR 08636** 

CASE: Morz flas, II SDG: B7/2/3/
Instrument ID: GCMS-1 DATE ANALYZED: 12/11/02 BFB Tune OK? (YES) NO

	ноја	Time	S	tand	lard	3: (	1, 1	; 11	=<109	हे)
	11010	11	S	urro	gate	es		Inte	rnal	S
Sample Number	Aro	A11	1	2	3	4	1	2	3	4
2120224-bsd/(clissed)									个	
BZ1Z131-01 RE1			$\downarrow$	V						
-63 REI			J	1						
-O4 RE1							1			
-05 RE 1			1	1						
-06 RF1										
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MS/MSD OK? YES NO Comment:		<u></u>		<u> </u>					L	<u> </u>

MS/MSD OK? YES NO Comment:

LCS OK?

YES NO Comment:

IC Date: 12/65 CC Date: 12/11/02 Resulting Action "J", "UJ", "R" < 0.05 COMPOUND > 30% < 0.05 > 25% (Hit/Non-Detect) Acrea 67.3 63.4 35-3 11-Carbon Tatrachlorida 46.99 2-Hexanone 40.19 Carpon Dischfiel 31.1 1/05 33.4 32.C 43.6 53.9 55-1

METHOD BLANK MC RL	FIELD BLANK:	TRIP BLANK:
		**************************************

CASE: Morey Phose II SDG: B2/2/3/
Instrument ID: G-CMS-4 DATE ANALYZED: 12/11 BFB Tune OK? YES NO

	HO14	Time	S	tand	dard	s: (	1, 1	7 11	=<10	ક)
	11014	TIME	S	urro	gat	es		Inte	rnal	s
Sample Number	Aro	A11	1	2	3	4	1	2	3	4
2120215 - 61/6-1 2120215 - 65-1(=ehusia)										
2120215 - 65-1(26465m)										
BZ12131-02 Diterior										
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			<u> </u>							
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/			<u> </u>	<u> </u>			<u> </u>	ļ		<u> </u>
S/MSD OK? YES NO Comment:			<u></u>	<u> </u>		<u> </u>	L	<u></u>		<u></u>

LCS OK?

YES NO

Comment:

11/8/02 CC Date: 12/11 IC Date: Resulting Action "J", "UJ", "R" > 25% COMPOUND < 0.05 > 30% < 0.05 (Hit/Non-Detect) 32.35 40.5 Browne Mene Acrem 71.4 110 nece 118 54.2 2-Between 53.0 61,4 38.69 1,1,2,2. Tetrachlorse Prane 35-35 46.5 Diobloradi Avaramenana 28.2 Vint Chloride 47.0 Viry actate 40,9 51.7 53.8

METHOD	BLANK:	1711.	<rl< th=""></rl<>
- -	Acrt	<u>~ 3.7</u>	<u> </u>

FIELD	BLANK	:	 	 	

TRIP	BLANK:	 	

Qualified Data Reports

MOR 08639





1380 Busch Parkway Buffalo Grove, Illinois 60089 Email: Info@glalabs.com (847) 808-7766 FAX (847) 808-7772

CDM

125 S. Wacker Dr. Suite 600 Chicago IL, 60606 Project: Morey Phase II

Project Number: Morey P2

Project Manager: Mark Peters

Reported:

12/12/02 16:02

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MP-SB-04-3840	B2J2131-01	Soil	12/09/02 08:25	12/09/02 16:00
MP-SB-05-0507	B212131-02	Soil	12/09/02 11:20	12/09/02 16:00
MP-SB-05-3537	B212131-03	Soil	12/09/02 11:30	12/09/02 16:00
MP-SB-05-3840	B212131-04	\$oil .	12/09/02 11:35	12/09/02 16:00
MP-SB-06-1820	B212131-05	Soil	12/09/02 13:05	12/09/02 16:00
MP-SB-06-3840	B212131-06	Soil	12/09/02 13:10	12/09/02 16:00

Great Lakes Analytical--Buffalo Grove

Andy Johnson

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Andy Johnson, Project Manager

MOR 08640

Page 1 of 9



Skalus



1380 Busch Parkway Buffalo Grove, Illinois 60089 Email: info@glalabs.com (847) 808-7766 FAX (847) 808-7772

CDM

125 S. Wacker Dr. Suite 600 Chicago IL, 60606 Project: Morey Phase II

Project Number: Morey P2 Project Manager: Mark Peters Reported: 12/12/02 16:02

## Volatile Organic Compounds by EPA Method 5035/8260B

Great Lakes Analytical--Buffalo Grove

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MP-SB-04-3840 (B212131-01RE1) Soil	Sampled: 1	2/09/02 08:25	Received:	12/09/02	16:00				Q
Acetone	ND	UJ 24.7	ug/kg dry	1	2120209	12/10/02	12/11/02	5035/8260B	
Benzene	ND	4.95	11	×	. n	. 18	tt .	**	
Bromodichloromethane	ND	4,95	tr .	*	Ħ	n.	n n		
Bromoform	ND	4.95	Ħ	¥	n	n	ч	n	
Bromomethane	ND	4.95	. ,	*.	Ħ	t <del>r</del>	n		
2-Butanone	ND	9.89	p ·			'n	ri	ų	
Carbon disulfide	ND	4.95	11		н	. # .	н .	Ħ	
Carbon tetrachioride	ND	4.95	er .	Ħ	tt	"	ti	0	
Chlorobenzene	ND	4.95		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		**		*	
Chlorodibromomethane	ND	4.95		.#	. *	. 14	•	. 1 .1 <b>u</b> .	
Chloroethane	ND	4.95	11	4	P	pt .	ti.	H	
Chloroform	ND	4.95		4	P	91	11	11	
Chloromethane	ND	4.95	19		11	н	#	H H	
1,1-Dichloroethane	ND	4.95	1)	4	*		17	101	
1,2-Dichloroethane	ND	4.95	11	н	н	n			
1,1-Dichloroothene	ND ND	4.95			h	_			
sis-1,2-Dichlorgethene	ND	4.95	n			., 31	 11		
rans-1,2-Dichtoroethene				51			.,		
,2-Dichloropropane	ND	4.95	n .	11	- 11				
1,3-Dichloropropene (cis + trans)	ND	4.95	11			11		11	
Sthylbenzene	ND	2,97			.H	11	rs .	н	
	ND	4.95	11	. н	Ĥ	н -		11	
2-Hexanone	ND	9.89		16	H .		**	10	
Methylene chloride	ND	4.95	. 4		11	. 0	11	H	
-Methyl-2-pentanone	ND ND	9.89	<del></del>		H	39	"	,n	
Styrene	ND	4.95	. 19	II .	U	H	ii ii	11	
,1,2,2-Tetrachloroethane	ND	4.95	H	10	n .	ŋ	43		
etrachloroethene	ND	4,95	н	, ii	11	· •	#		
oluene	ND	4.95	ii.	tt	n		n 171	a a	
,1,1-Trichloroethane	ND	4.95	9	H	ŧ.	, n	a		
.1,2-Trichloroethane	ND	4.95	, in	n .	a)		u .	н	
richloroethene	ND	4.95	it.		н	н	n		
richlorofluoromethane	ND	4.95	er .	u ·	tř	er e			
'inyl acetate	ND	9.89	18	н	tr	n	<b>(1</b>	ži.	
'inyl chloride	ND	4,95	u	n.		41	11	n	
otal Xylenes	ND	9.89	"	. H	11	a i	n	H T	
urrogate: Dibromofluoromethane		49.1 %	73.8-1	47		n	.,		
urrogate: 1,2-Dichloroethane-d4		19.2 %	61,8-1			is .	**	•	
urrogate: Toluene-d8		106 %				,,	,,		. 04
urragate: 4-Bromofluorobenzene		71.1%	70.1-1. 66.3-1.			"	"		

Great Lakes Analytical-Buffalo Grove

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mady Johnson



Stalat 1380 Busch Parkway Buffalo Grove, Illinois 60089



Email: info@glalabs.com (847) 808-7768 FAX (847) 808-7772

CDM

125 S. Wacker Dr. Suite 600 Chicago IL, 60606 Project: Morey Phase II

Project Number: Morey P2

Project Manager: Mark Peters

Reported: 12/12/02 16:02

### Volatile Organic Compounds by EPA Method 5035/8260B

Great Lakes Analytical-Buffalo Grove

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MP-SB-05-0507 (B212131-02) Suil	Sampled: 12/09/02 1	1:20 Re	celved: 12/	09/02 16:0	)0				Q
Acetone	ND UJ		ug/kg dry	ì	2120209	12/10/02	12/10/02	5035/8260B	
Benzene	ND	5.30	H .		т н	. H	n-	- 11	
Bromodichloromethane	ND	5.30	u	*	n,	ú	"	#	
Bromoform .	NDUJ	5.30	le .	•	¥	*	H	n	
Bromomethane	ND UJ	5.30	11	<b>u</b> -	#	n	н	H	
2-Butanone	ND UJ	10.6	0 .	19	H	<b>n</b> ,	n	n	
Carbon disulfide	ND VJ	5,30	u ·	11	#	17	# .	, я	
Carbon tetrachloride	ND	5.30		u	2.7 cm	\$6	21	н	
Chlorobenzene	ND	5.30	11	ti.	В.,		19	, tr	
Chlorodibromomethane	ND UJ	5.30	4	11	ii e	##	19	,n · ·	
Chloroethane	ND	5.30	n	4	#1	В	n		
Chloroform	ND	5,30	#		. W	u u	U	H	
hloromethane	ND	5,30		н	10	t)	n°	H .	
,1-Dichloroethane	ND	5.30	н	er .		H	11	. 49	
,2-Dichloroethane	ND UJ	5,30		19.	*	ŧi	•		
1-Dichloroethene	ND	5.30	Ħ	, <del>,</del> ,		. 11	ji.	11	
s-1,2-Dichloroethene	ND	5.30		· 🙀	•	· · · · · · · · · · · · · · · · · · ·	13	n	
ans-1,2-Dichloroethene	ND	5.30	13		<b>H</b> 1	n	ni	11	
2-Dichloropropane	ND	5.30				11	.71	B B	
3-Dichloropropene (cis + trans)	ND	3.18		n		u		ı ı	
thylbenzene	ND	5,30		*		a ·	11		
Нехалопе	NDUJ	10.6	11		*		11		
lethylene chloride	ND	5.30	H.		*		H		
-Methyl-2-pentanone	NDUT	10,6	, to					u ·	
lyrene	ND	5.30	R		15	*		и	
1,2,2-Tetrachloroethane	ND W	5.30				er		11	
etrachloroethene	10300	265	μ	40	11	Ħ		0	
oluene	ND	53.0	e e	50	0	**	12/11/02		
1.1-Trichloroethane				l n			12/10/02		
1,2-Trichloroethane	ND VJ	5.30	)r				. H	Ħ	
ichloroethene	NDUJ	5.30			7		. #		
ichlorofluoromethane	ND	5.30	)3 50	er c	**	77		11	
nyl acetate	ND UJ	5.30				. n		,,	
inyl accure	ND UJ	10.6				"			
otal Xylenes	ND ND	5.30 10.6		*	# #		н .		
rrogate: Dibromofluoromethane	174		****						<del></del>
rrogate: Dioromojiuoromethane irrogate: 1,2-Dichloroethane-d4		101%	73.8-1		-#	*			
		108 %	61.8-1		•	"	tt	n	
rrogate: Toluene-d8		102 %	70.1-1		*	u	" .	. <b>r</b> .	
rrogate: 4-Bromofluorobenzene		100 %	66.3-1	19	*		: 4	μ	

Great Lakes Analytical-Buffalo Grove

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Andy Johnson, Project Manager

**MOR 08642** 

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1380 Busch Parkway Buffalo Grove, Illinois 60089

Email: info@glalabs.com (847) 808-7766 FAX (647) 808-7772

CDM

125 S. Wacker Dr. Suite 600 Chicago IL, 60606 Project: Morey Phase II

Project Number: Morey P2
Project Manager: Mark Peters

Reported: 12/12/02 16:02

# Volatile Organic Compounds by EPA Method 5035/8260B

Great Lakes Analytical-Buffalo Grove

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MP-SB-05-3537 (B212131-03RE1) Soil	Sampled: 12	2/09/02 11:30	Received:	12/09/02	16:00				Q
Acctone	ND	UJ 29.3	ug/kg dry	1	2120209	12/10/02	12/11/02	5035/8260B	
Benzene	ND	5.87	u	n		n	lt.	н	
Bromodichloromethane	ND	5.87	200 <b>10</b> 100 100	. 11		t#	н	p	
Bromoform	ND	5.87	<b>n</b> .	a		LP .	н	•	
Bromomethane	ND	5.87	Ħ	.,#	· *	ų .	<b>}•</b>	, <b>P</b>	
2-Butanone	ND	11.7	n		¥ ''	17	Ħ	•	
Carbon disulfide	ND	5.87	31	M		n	û	. 11	
Carbon tetrachloride	ND	5.87	H	ti ti			27	. #	
Chlorobenzene	ND	5.87	H ,	15		tf	H,	н	
Chlorodibromomethane	ND	5.87	ii ,	• •	w	n	#	н	
Chloroethane	ND	5.87	Ħ		9	. 11	H	н	
Chloroform	ND	5.87	11	*	¥.	31		н	
Chloromethane	ND	5.87	a,	Ħ					
1,1-Dichloroethane	ND	5.87	p	. <b>1</b> 1	Ħ		**		
1,2-Dichloroethane	ND	5.87	n	· ·	. 11		3)		
,1-Dichloroethene	ND	5.87	11	nt.		u."	ii	· #	
sis-1,2-Dichloroethene	ND	5.87	**	n .					
rans-1,2-Dichloroethene	ND	5.87	н		н	ii		<u>.</u>	
,2-Dichloropropane	ND	5.87			ų				
,3-Dichloropropene (cis + trans)	ND	3.52	38	li li		n	n		
khylbenzene	ND	5.87	H	ir ir	p	,			
-Hexanone	ND	11.7	Ð		D.	η			
Acthylene chloride	ND					,,			
-Methyl-2-pentanone		5.87	n			. 75	, 71		
lyrene	ND	11.7				<b>19</b>		, <del>H</del>	
1,2,2-Tetrachloroethane	עא	5.87	т	и .	. ,	п	(#	.0	
orrachloroethene	ND	5.87	н .	. •	<b>'</b> #	<b>57</b>		и .	
oluene	ND	5.87	Ħ	Ħ	n	40 %	n	n	
I,I-Trichloroethane	ND	5.87		ul.	11	#	5 (1 <b>64</b>		
1,2-Trichloroethane	ND	5.87	#			31		#	
richloroethene	ND	5.87		•	1)	8	H	· , •	
richlorofluoromethane	ND	5.87	U		. #	. 0	*	#	
inyl acetate	ND	5.87	W.	rt .	11	¥	n	n	
	ND /	11.7	Ħ	Ħ	tr	ņ	4	*	
inyl chloride	ND	5.87	H	Ψ.	, <b>n</b>	11		· n J	
otal Xylenes	ND 🐇	11,7	**	Ħ		. #		H	
irrogate: Dibromofluoromethane		64.8 %	73.8-14.	2	н	#	n	<b>"</b> 1	. 04
irrogaie: 1,2-Dichloroethane-d4		23.0 %	61.8-16				ii .	" 1	_
rrogate: Taluene-d8		128 %	70.1-13.		n n	4		, 1	. 04
rrogate: 4-Bromofluorobenzene		103 %	66.3-11		,,		w	,,	

Great Lakes Analytical-Buffalo Grove

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Andy Johnson, Project Manager

**MOR 08643** 

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Sylvelos

1380 Busch Perkway Buffalo Grove, Illinois 60089



Email: info@glalabs.com (847) 808-7768 FAX (847) 808-7772

CDM

125 S. Wacker Dr. Suite 600 Chicago IL, 60606 Project Morcy Phase II

Project Number: Morey P2
Project Manager: Mark Peters

Reported: 12/12/02 16:02

# Volatile Organic Compounds by EPA Method 5035/8260B

Great Lakes Analytical-Buffalo Grove

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MP-SB-05-3840 (B212131-04) Soll	Sampled: 12/09/0	2 11:35 Rec	eived: 12/0		)0				O2,Q0
Acerone	ND (		ug/kg dry	1	2120209	12/10/02	12/10/02	5035/8260B	
Benzene	ND	3.86	*	. 11	н	ti	n		
Bromodichloromethane	ND	3.86	•	n 155	it.	я	IT	· *	
Bromoform	ND	3.86		и	11	, ú	ħ		
Bromomethane	ND	3.86	•	0 '	u	• 00	n	. **	
2-Butanone	ND	7.72	T	**	н н	12	4 #	* #	
Carbon disulfide	ND	3,86	ŧ	H -		n :	n		
Carbon tetrachiloride	ND	3.86	n	11 <b>p</b> r	11	**	<b>70</b> .	н .	
Chlorobenzene	ND	3.86	tr		И	te	n n		
Chlorodibromomethane	ND	3.86	ř	11	<b>A</b> .			11	
Chloroethane	ND	3.86		71		н	п	- · · · · · · · · · · · · · · · · · · ·	
Chloroform	ND	3.86	ji	п	11	н			
Chloromethane	ND	3.86	н	n	16	 H	ú		7.5
.l-Dichloroethane	ND	3.86	#		n .	n in	. u.		
,2-Dichloroethane	ND	3.86	U	11				**	
.I-Dichlornethene	ND	3.86	11	0			117	15	
is-1,2-Dichloroethene	ND	3.86	#			7	**		
ans-1,2-Dichloroethene	ND		11					"	
2-Dichloropropane	ND	3.86 3.86		,	.**	it.	er .	# 1 m	,
3-Dichloropropene (cis + trans)	ND		_	4	H .	17	\$1	, n	
thylbenzene		2,32			n	н	<b>1</b> 1	, n	
Hexanone	ND	3.86	, 11		H		u	11	
lethylene chloride	ND	7.72		19	٠.	. 1)	H	· n	
Methyl-2-pentanone	ND	3.86	11	н	ŧ		<b>"</b>	**	
yrene	ND	7,72	**	H	. в.		b	#	
1,2,2-Tetrachiloroethane	ND	3.86	'n		a			'. n'	
trachloroethene	ND	3.86	er er	. *	н .	77	11	11	
aracniorocinene oluene	ND	3.86	н	*	# .	n	a	н	
	ND	3.86	n		'n	ń	12/11/02		
1,1-Trichloroethane	ND	3.86	н	<b>a</b> .	11	a	12/10/02	ъ	
1,2-Trichloroethane	ND	3.86	in .		n '	11	11		
lchloroethene	ND	3.86		e .			ŋ	n	
ichlorofluoromethane	ND	3.86	49	. #	to	4	Ψ.		
nyl acetate	ND	7.72	e e	Ħ	ti .	. 19	n	11	
nyl chloride	ND	3.86	п	H	n	H	н	. 11.	
tal Xylenes	עא 🗸	7.72	tt ·	*	H	u	н		
rrogate: Dibromofluoromethane		106 %	72 9 14	·	<u></u>			1 14 pa	
rrogate: 1,2-Dichloroethane-d4	* · · ·		73.8-142			. 4	y .	ń	
rrogate: Toluene-d8		115%	61.8-168		V	,,	lı .	H	
rrogate: 4-Bromofluorobenzene	· •	77.7 %	70.1-131		. #	. <b>n</b> .		at	
		69.9 %	66,3-119	7		. #	<i>u</i> .	· . •	

Great Lakes Analytical-Buffalo Grove

Andy Johnson

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Andy Johnson, Project Manager

MOR 08644

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Email: info@glalabs.com (847) 808-7766 FAX (847) 808-7772

CDM

125 S. Wacker Dr. Suite 600 Chicago IL, 60606

1380 Busch Parkway Buffalo Grove, Illinois 60089

Project: Morey Phase II

Project Number: Morey P2 Project Munager: Mark Peters

Reported: 12/12/02 16:02

# Volatile Organic Compounds by EPA Method 5035/8260B

## Great Lakes Analytical-Buffalo Grove

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MP-SB-06-1820 (B212131-05RE1) Soil	Sampled: 12	2/09/02 13:05	Received:	12/09/02	16:00			**************************************	QC
Acetone	ND.	UJ 17.1	ug/kg dry	ı	2120209	12/10/02	12/11/02	5035/8260B	<del></del>
Benzone	ND	3.42	0	39		n	Ħ	п	
Bromodichloromethane	ND	3.42		H	. •	n	n	e e	
Bromoform	ND	3,42	н	*	•	40.00	<b>.</b>	**	
Bromomethane	ND	3.42	at .	. BE	*	H	. 7	u	
2-Butanone	ND	6.84	11	11	Ħ		H	4	
Carbon disulfide	ND	3.42	)1	W.			10	4 ·	*
Carbon tetrachloride	ND	3.42	<b>11</b> .	• 1	** . <b>*</b>	*	<b>,#</b>	tt:	
Chlorohenzene	ND	3.42	. #	· 87	R		n	91	
Chlorodibromomethane	ND	3.42	\$17	et	w	n v v	Ŋ	u	
Chloroethane	ND	3.42	ü	11		. 41	<b>1</b> /-	n i	
Chloroform	ND	3.42	; <b>11</b> -	H		ur .	**	and the second	
Chloromethane	ND	3.42	н	•			41		
1,1-Dichloroethane	ND	3.42	н	h		n	#	. n	
1,2-Dichloroethane	ND	3.42	н		m	11	18	n ,	
1,1-Dichloroethene	ND	3.42	b	н		i di	n .	B	
ris-1,2-Dichloroethene	ND	3.42		n		ii	11 .	В	•
rans-1,2-Dichloroethene	ND	3.42	ri .	Ħ		ti	n .	p	
1,2-Dichloropropans	ND	3.42		. 11	**	it	D.	in .	
,3-Dichloropropene (cis + trans)	ND	2.05	n	) н ,		N			
Sthylbenzene	ND	3,42	u	, ,			11		
?-Hexanone	ND	6.84	n			n	н		*
Methylene chloride	ND	3.42	11		" n		" D		
-Methyl-2-pentanone	ND	6.84			. н			,,	
Styrene	ND	3.42							
,1,2,2-Tetrachloroethane	ND		· · "				"	. "	
etrachloroethene	ND ND	3.42	*			<b>.</b>		п	
olugne		3.42	n .		n p	#	h h		
,1,1-Trichloroethane	ND ND	3,42	н	-		. "		``	
,1,2-Trichloroethane		3.42	v	т			11		
richloroethene	ND	3.42		4	k	ii ii		11	
Hehlorofluoromethane	ND	3.42		*	Ħ	n n	#*-	<b>4</b>	
inyl acetate	ND	3.42	. #	m ·	la .	in .	11	ų ·	
'inyl chloride	ND	6.84	D .	7	, . <b>v</b>	, · · · tr	<b>H</b>	H .	
otal Xylenes	ND	3.42	. 4	, n°	. <b>v</b>	#	. 17	. <b>म</b>	
* · · · · · · · · · · · · · · · · · · ·	ND ~	6.84	, p	* 	•	И.		n in	
urrogate: Dibromofluoromethane		66.7 %	73.8-14	2	ti .	n	#	" L	04
urrogate: 1,2-Dichloroethane-d4		29.8 %	61.8-16		a ·	н	n	" L	04
urrogate: Toluene-d8		120 %	70.1-13		* •	o	*	п .	
urrogate: 4-Bromofluorobenzene		90.1%	66.3-11		p	11	н	<sub>H</sub>	

Great Lakes Analytical -- Ruffalo Grove

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Andy Johnson, Project Manager

MOR 08645

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CDM

125 S. Wacker Dr. Suite 600 Chicago IL, 60606 Project: Morey Phase II

Project Number: Morey P2
Project Manager: Mark Peters

Reported: 12/12/02 16:02

Volatile Organic Compounds by EPA Method 5035/8260B

Great Lakes Analytical-Buffalo Grove

Analyte	Result	eporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MP-SB-06-3840 (B212131-06) Sull	Sampled: 12/09/02 13:	10 Rec	elved: 12/0	9/02 16:0	)0	******************************	**************************************		Q
Acetone	ND UJ		ug/kg dry	1	2120209	12/10/02	12/11/02	5035/8260B	
Benzene	ND	3.88	,	10		и	ii .	*	
Bromodichloromethane	ND	3.88	H	11	•				
Bromoform	ND	3.88	*	n		л	14.	<b>i</b>	
Bromomethane	ND	3.88	, ń	ti		d	ii .	P. 1	
2-Dutanone	ND UJ	7.76	u u	· es	*		H		
Carbon disulfide	ND VJ	3.88	<b>#</b> 100	44		· W	n i	۴	
Curbon tetrachloride	ND	3.88	n	to et			и :	p	
Chlorobenzene	ND	.3.88	н				18	n	
Chlorodibromomethane	ND	3,88	n	11	•	'n	(B - 1 )	11 ty	
Chloroethane	ND	3.88	n	H				n	
Chloroform	ND	3.88	и .	11		n	19		
Chloromethane	ND	3.88	Ħ	"			ø		
1,1-Dichloroethane	ND UJ	3.88	n'	н				ii .	
.2-Dichloroethane	ND	3,88	4	18		31	17	. 11	
1,1-Dichloroethene	ND	3.88	*1	ıı		11 .	n .	h	
cis-1,2-Dichloroethene	ND	3,88	5 . 0	IE	á.				
rans-1,2-Dichloroethene	ND	3.88	n	11	4	S)	10	0	
,2-Dichloropropane	ND	3.88	а .	11		9	***		
,3-Dichloropropene (cis + trans)	ND	2,33	n \	н .					
thy lbenzene	ND	3.88		. "			5 P	_	
-Hexanone	ND UJ	7.76		it		*			
Acthylene chloride	ND		н		-	. "			
-Methyl-2-pentanone	עט מא	3.88 7.76		11	•	n	ti v	**	
tyrene	ND ND	3.88	n n					n	
,1,2,2-Tetrachloroethane	ND		n n	 n		n H	17	,	
etrachloroethene	ND	3.88	n	,		·	11	H	
oluene		3.88	11	,, ,,			11	. "	
,1,1.Trichloroethane	ND ND	3.88		"	R	**	12/12/02	***	
,1,2-Trichloroethane	•	3.88		n n			12/11/02	H	
richloroethene	ND	3.88	n 		•		, p	. 11	
richlorofluoromethane	ND	3.88	11 11	n b		11		0	
inyl acetate	ND	3.88		n 3.		· • • • • • • • • • • • • • • • • • • •	'n	n	
inyl chloride	ND UJ	7.76				•		4	
otal Xylenos	ND	3.88			<b>*</b>		n	n	
	ND ND	7.76	~, · ·	и.			·	11	
urrogate: Dibromofluoromethane		5.6 %	73.8-14		•	H	#	,,	
irrogate: 1,2-Dichloroethane-d4		1.5 %	61.8-16		. *	#	H	μ .	
urogate: Toluene-d8		5.6 %	70.1-13	<i>!</i>	•	"		#.	
irrogate: 4-Bromofluorobenzene	89	2.7 %	66.3-11	9	*	и			

Great Lakes Analytical--Buffalo Grove

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Andy Johnson

## CDM Data Validation Report

**Project/Site Name:** 

Morey Phase II

**Collection Date:** 

July 18, 2003

**CDM Report Date:** 

September 19, 2005

Matrix:

Soil

Parameters:

Volatiles

Validation Level:

Level IV

Laboratory:

STAT Analysis Corporation

Sample Delivery Group (SDG):

0307169

## Sample Identification

Site ID	Lab ID
SB-07 (4'-6')	0307169-001
SB-08 (4'-6')	0307169-002
SB-08D	0307169-003
SB-09 (2'-4')	0307169-004
SB-10 (1'-3')	0307169-005
FB-01	0307169-006
SB-11 (1'-3')	0307169-007
SB-12 (1'-3')	0307169-008
SB-13 (1'-3')	0307169-009
SB-14 (1'-3')	0307169-010
SB-15 (1'-3')	0307169-011
SB-16 (1'-3')	0307169-012
TB-01	0307169-013

#### Introduction

This data review covers 11 soil samples, one field blank and one trip blank listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

Data qualifiers were added as appropriate to a copy of the data reports. These modified data reports are provided at the end of this report.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

The following are definitions of the data qualifiers:

- U Indicates the compound was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

## I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

#### II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

#### III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 15.0% for each individual compound and less than or equal to 30.0% for calibration check compounds (CCCs).

In the case where %RSD was greater than 15.0%, the laboratory used a calibration curve to evaluate the compound. All coefficients of determination  $(r^2)$  were greater than or equal to 0.990.

For the purpose of technical evaluation, all compounds were evaluated against the 30.0% (%RSD) and 0.05 relative response factor (RRF) National Functional Guideline criteria. All compounds were within the validation criteria with the following exceptions:

Date	Compound	%RSD	Associated Samples	Flag	RRF
7/20/03 VOC-1	Acetone	50.79	SB-07, SB-08D SB-09, SB-10 SB-11, SB-12	J (all detects)	
7/21/03 VOC-4	Bromomethane	42.41	FB-01, TB-01	J (all detects)	
7/22/03 VOC-2	Acetone	50.06	SB-13, SB-14 SB-15, SB-16 SB-08	J (all detects)	

Average relative response factors (RRF) for all volatile target compounds and system performance check compounds (SPCCs) were within method and validation criteria.

## IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs).

For the purpose of technical evaluation, all compounds were evaluated against the 25.0% (%D) and 0.05 RRF National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria with the following exceptions:

All continuing calibration criteria were met.

#### V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

No volatile contamination was found in the field blanks or trip blanks associated with this sample set.

#### VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. Surrogate recoveries for all samples were within criteria.

#### VII. Matrix Spike/Matrix Spike Duplicates

Sample SB-09 (2'-4') was used for matrix spike analysis. Several compounds had recoveries that were outside criteria. A copy of MS/MSD reporting sheet is attached to this report. All compounds that had poor recovery were qualified as estimated "J" or "UJ" in sample SB-09 (2'-4') only. Based on professional judgment, since the surrogate, continuing calibration and the majority of LCS criteria were met for this SDG, none of the remaining samples were qualified based on MS/MSD results.

**MOR 08650** 

### **VIII.** Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits with the following exceptions:

LCS ID	Date	Compound	%R	Associated Samples	Flag
VLCS072403-1	7/24/03	Acetone	238	SB-07, SB-08D	J (all detects)
(VOC-1)		2-Butanone	137	SB-09, SB-10	UJ (all non-detects)
				SB-11, SB-12	
VLCSD072403-1		Acetone	247		
		2-Butanone	133		
VLCS072403-2	7/24/03	Acetone	136	SB-13, SB-14	J (all detects)
(VOC-2)				SB-15, SB-16	UJ (all non-detects)
VLCSD072403-2	-	Acetone	196	SB-08	
		2-Butanone	146		
		4-Methyl-2-pentanone	131		
		Carbon Disulfide	132		
	ļ				

## IX. Regional Quality Assurance and Quality Control

Not applicable.

#### X. Internal Standards

All internal standards met criteria

### XI. Target Compound Identifications

All target compound identifications were within validation criteria for samples for all samples.

## XII. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria for all samples.

#### XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

#### XIV. System Performance

The system performance was within validation criteria.

#### XV. Overall Assessment of Data

MOR 08651

Data flags have been applied to data reports and attached at the end of this report.

## XVI. Field Duplicates

Results for sample SB-08-(2'-4') and its duplicate SB-08D were reviewed and found to be comparable.

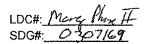
## XVII. Additional Findings

During review of the raw data in was determined that sample SB-08 (4'-6) was misidentified as SB-07 (4'-6) on line 9 of Form 5A on page 141. The data package was not corrected but a copy of the corrected form is attached to this report.

Data Validation Checklist, Worksheets And Supplemental Information

MOR 08653

### **VALIDATION FINDINGS CHECKLIST**

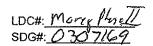


Page 1 of 2 Reviewer: 5/lincher

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				· ·
All technical holding times were met.	乂	l		
Cooler temperature criteria was met.	X			
II. GC/MS Instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	X			
Were all samples analyzed within the 12 hour clock criteria?	Х			
III. Initial calibration		1		
Did the laboratory perform a 5 point calibration prior to sample analysis?	X			
Were all percent relative standard deviations (%RSD) and relative response factors (RFF) within method criteria for all CCCs and SPCCs?	Х			
Was a curve fit used for evaluation? If yes, what was the acceptance criteria used?	X			1210099099
Did the initial calibration meet the curve fit acceptance criteria?	Х			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) ≥ 0.05?		Х		Sie work sheet
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	Х			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	Х			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?		Х		See would sheet
V. Blanks				
Was a method blank associated with every sample in this SDG?	X			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	X			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	X	$\otimes$		for west shot SK
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	X			
If the percent recovery (%R) for one of more surrogates was out of QC limits, was a reanalysis performed to confirm				
samples with %R outside of criteria?				
VII.: Matrix spike/matrix spike duplicates			I	
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in the SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	人			
Was a MS/MSD analyzed every 20 samples of each matrix?	X			

### **VALIDATION FINDINGS CHECKLIST**



Page 2 of 2 Reviewer: 5. Kircher

Method: Volatiles (EPA SW 846 Method 8260B)

Metriod. Volatiles (EFA 3VV 646 Metriod 6200B)		<del></del>		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		X		Sinnay Amubel
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	X			
Was an LCS analyzed per analytical batch?	X			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?		X		See work sheet
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			义	
Were the performance evaluation (PE) samples within the acceptance limits?			义	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	X			
Were retention times within +/- 30 seconds of the associated calibration standard?	X			
XI: Target compound identification				
Were relative retention times (RRTs) within +/- 0.06 RRT units of the standard?	×			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	义			
Were chromatogram peaks verified and accounted for?	X			
XII Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	X			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	Х			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?	X			
Were relative intensities of the major ions within +/- 20% between the sample and the reference spectra?	Х			
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?	X			
XIV. System performance				
System performance was found to be acceptable.	X			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	メ			
XVI. Field duplicates	1			
Field duplicate pairs were identified in this SDG.	X			
Target compounds were detected in the field duplicates.	X			1-4.4
XVII. Field blanks				
Field blanks were identified in this SDG.	Х			
Target compounds were detected in the field blanks.	<del>                                     </del>	X		
			L	I

## Crosswalk - Worksheet ID vs. Compound Name

chlorodifluoromethane hloromethane hylChloride comomethane hloroethane hloroform hloroethane hloroform hloroethane hloroform hloroethane hloroform	75-71-8 74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 75-35-4 76-13-1 67-64-1 75-15-0 79-20-9 75-09-2 156-60-5 1634-04-4 75-34-3 156-59-2 78-93-3 74-97-5 67-68-3	SPCC (%RSD CCC (RRF) CCC (RRF) SPCC (%RSD
aloromethane hylChloride comomethane aloroethane ichlorofluoromethane I-Dichloroethene I,2-Trichloro-1,2,2-trifluoroethane etone arbonDisulfide ethylAcetate ethyleneChloride ns-1,2-Dichloroethene t-ButylMethylEther I-Dichloroethane -1,2-Dichloroethene sutanone comochloromethane loroform ,1-Trichloroethane clohexane	74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 75-35-4 76-13-1 67-64-1 75-15-0 79-20-9 75-09-2 156-60-5 1634-04-4 75-34-3 156-59-2 78-93-3 74-97-5 67-66-3	CCC (RRF)
nyiChloride comomethane alcroethane ichlorofluoromethane I-Dichloroethene I,2-Trichloro-1,2,2-trifluoroethane etone arbonDisulfide ethylAcetate ethylAcetate ethyleneChloride ns-1,2-Dichloroethene t-ButylMethylEther I-Dichloroethane -1,2-Dichloroethene Butanone comochloromethane loroform ,1-Trichloroethane clohexane	74-83-9 75-00-3 75-69-4 75-35-4 76-13-1 67-64-1 75-15-0 79-20-9 75-09-2 156-60-5 1634-04-4 75-34-3 156-59-2 78-93-3 74-97-5 67-66-3	CCC (RRF)
omomethane alcroethane ichlorofluoromethane i-Dichloroethene I,2-Trichloro-1,2,2-trifluoroethane etone arbonDisulfide ethylAcetate ethyleneChloride ns-1,2-Dichloroethene t-ButylMethylEther i-Dichloroethane -1,2-Dichloroethene Butanone omochloromethane iloroform ,1-Trichloroethane clohexane	74-83-9 75-00-3 75-69-4 75-35-4 76-13-1 67-64-1 75-15-0 79-20-9 75-09-2 156-60-5 1634-04-4 75-34-3 156-59-2 78-93-3 74-97-5 67-66-3	CCC (RRF)
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I,2-Trichloro-1,2,2-trifiuoroethane etone arbonDisulfide ethylAcetate ethyleneChloride ns-1,2-Dichloroethene t-ButylMethylEther I-Dichloroethane -1,2-Dichloroethene Butanone omochloromethane iloroform ,1-Trichloroethane clohexane	76-13-1 67-64-1 75-15-0 79-20-9 75-09-2 156-60-5 1634-04-4 75-34-3 156-59-2 78-93-3 74-97-5 67-66-3	
etone  arbonDisulfide  athylAcetate  athyleneChloride  ns-1,2-Dichloroethene  t-ButylMethylEther  -Dichloroethane  -1,2-Dichloroethene  Butanone  amochloromethane  loroform  ,1-Trichloroethane  clohexane	67-64-1 75-15-0 79-20-9 75-09-2 156-60-5 1634-04-4 75-34-3 156-59-2 78-93-3 74-97-5 67-66-3	SPCC (%RSD
arbonDisulfide ethylAcetate ethyleneChloride ns-1,2-Dichloroethene t-ButylMethylEther -Dichloroethane -1,2-Dichloroethene Butanone omochloromethane loroform ,1-Trichloroethane clohexane	75-15-0 79-20-9 75-09-2 156-60-5 1634-04-4 75-34-3 156-59-2 78-93-3 74-97-5 67-66-3	SPCC (%RSD
ethylAcetate ethyleneChloride ns-1,2-Dichloroethene t-ButylMethylEther -Dichloroethane -1,2-Dichloroethene Butanone omochloromethane loroform ,1-Trichloroethane clohexane	79-20-9 75-09-2 156-60-5 1634-04-4 75-34-3 156-59-2 78-93-3 74-97-5 67-68-3	SPCC (%RSD
ethyleneChloride ns-1,2-Dichloroethene t-ButylMethylEther -Dichloroethane -1,2-Dichloroethene Butanone bmochloromethane loroform ,1-Trichloroethane clohexane	75-09-2 156-60-5 1634-04-4 75-34-3 156-59-2 78-93-3 74-97-5 67-68-3	SPCC (%RSD
ns-1,2-Dichloroethene t-ButylMethylEther I-Dichloroethane -1,2-Dichloroethene Butanone omochloromethane loroform ,1-Trichloroethane clohexane	156-60-5 1634-04-4 75-34-3 156-59-2 78-93-3 74-97-5 67-68-3	SPCC (%RSD
t-ButylMethylEther I-Dichloroethane -1,2-Dichloroethene Butanone Dmochloromethane Iloroform ,1-Trichloroethane clohexane	1634-04-4 75-34-3 156-59-2 78-93-3 74-97-5 67-68-3	SPCC (%RSD
-Dichloroethane -1,2-Dichloroethene Butanone omochloromethane loroform ,1-Trichloroethane clohexane	75-34-3 156-59-2 78-93-3 74-97-5 67-68-3	SPCC (%RSD
-1,2-Dichloroethene Butanone omochloromethane loroform ,1-Trichloroethane clohexane	156-59-2 78-93-3 74-97-5 67-66-3	SPCC (%RSD
Butanone omochloromethane loroform ,1-Trichloroethane clohexane	78-93-3 74-97-5 67-66-3	
omochloromethane loroform ,1-Trichloroethane clohexane	74-97-5 67-66-3	
loroform ,1-Trichloroethane clohexane	67-66-3	
,1-Trichloroethane clohexane	_	000 (000)
clohexane		CCC (RRF)
	71-55-6	
rbonTetrachloride	110-82-7	
	56-23-5	
nzene	71-43-2	
-Dichloroethane	107-06-2	
chloroethene	79-01-6	
thylcyclohexane	108-87-2	
-Dichloropropane	78-87-5	CCC (RRF)
omodichloromethane	75-27-4	****
-1,3-Dichloropropene	10061-01-5	
Methyl-2-pentanone	108-10-1	
uene	108-88-3	CCC (RRF)
ns-1,3-Dichloropropene	10061-02-6	- 000 (11117
,2-Trichloroethane	79-00-5	
rachloroethene	127-18-4	
		<u> </u>
lexanone	591-78-6	
romochloromethane	124-48-1	
	_	0000 (1/000
		SPCC (%RSD
		CCC (RRF)
	1330-20-7	
	100-42-5	
	75-25-2	SPCC (%RSD
propyibenzene	98-82-8	
,2,2-Tetrachloroethane	79-34-5	SPCC (%RSD
	541-73-1	
	106-46-7	
	<del></del>	
4- i i i i i i i i i i i i i i i i i i i	0/-01-0	
	ļ	
	-Dibromoethane lorobenzene sylbenzene enes(total) rene pmoform propylbenzene -Dichlorobenzene -Dichlorobenzene -Dichlorobenzene -Dibromo-3-chloropropane -4-Trichlorobenzene -4-Trichlorobenzene	-Dibromoethane 106-93-4 108-90-7 108-90-7 108-90-7 108-90-7 108-90-7 108-90-7 108-90-7 108-90-7 108-90-7 108-90-7 108-90-7 100-41-4 100-41-4 100-41-4 100-41-5 100-42-5 100-42-5 100-42-5 100-42-5 100-42-5 100-42-5 100-42-5 100-42-5 100-42-5 100-42-5 100-42-8 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46-7 108-46

CASE: Mary Phys I SDG: 0307/69

Instrument ID: VOC 1 DATE ANALYZED: 7/24/03 BFB Tune OK? (YES) NO

	Hold Time Standards: ( ),			1,	1, 1; 11=<10%)					
	11010	ı ı.m.	S	urro	gat	es		Inte	ernal	s
Sample Number	Aro	All	1	2	3	4	1	2	3	4
VSTOUSZ										
VBLK072403-1										
VLC5072403-1										
VLCSD072403-1										
58-07 (4-6)										
5B-08D										
5B-09 (2-4)					1					
58-09 (2-4)ms					and a					
li ASA				1	1 1					
SB-10 (1-3)					ì					<u></u>
5B-11 C1-3)					Í					t
5B-12 (1-3)					1					مسلد ا
					1		<u> </u>			
					1				<u> </u>	
		<u> </u>			- 1					
									ŀ	
					1					

LCS OK?

YES (NO) Comment: (250; Q-131%; I-235%

IC Date: 7/20/03 CC Date: 7/24 Resulting Action "J", "UJ", "R" > 25% COMPOUND < 0.05 > 30% < 0.05 (Hit/Non-Detect) Aceten 50.79

METHOD	BLANK: OK	FIELD BLANK: OK	TRIP BLANK: U/C	NT.
				non tarket
OV-workshe	et-Method 8260B using calibration	criteria from CLP National Functional Guidelines	for Organic Reveiw-1999	confer

MOR 08657

SDG: 0307/69

Instrument ID: VDC-4

DATE ANALYZED: 7/22/03

BFB Tune OK? YES

	Hold	Time	S	tand	lards	3: (	1, 1	; 11	=<10°	<b>ቴ</b> )
	Hord	TIME	Surrogates				Internals			
Sample Number	Aro	All	1	2	3	4	1	2	3	4
VS+0050										
VBL16072203-4					1					
VLCS072203-4										<u> </u>
VLCSD072203-4						,				
FB-OI					Speed					
TB-01										
	* 44 T				ima					
					Jon					
		1								
					1					
					a de la companya de					
						·				
					- 4					
		1		<b> </b>	1					

LCS OK?

YES

) Comment: LOSO: N-297 Nortaight

	IC Date	: 7/21/03	CC Date:	1/22	Resulting Action
COMPOUND	< 0.05	> 30%	< 0.05	> 25%	"J", "UJ", "R" (Hit/Non-Detect)
Dictore Bromometion	<b>Y</b>	4126.79		enga €	J/- Non Target
MTBE	0.036	89.25		244	Non Target
				e de la companya de	
				1 1	
				1 1	
	100				
		i i i			
		·			

METHOD	BLANK:	01	

FIELD BLANK: OK

TRIP BLANK: OK

TABLE V-1: VOLATILE ANALYSIS 8260B (DV-under EPA NFG)

CASE: Moresy Phase I

SDG: <u>0307/69</u>

Instrument ID: VOC-Z

DATE ANALYZED: 7/24/03

BFB Tune OK? YES

NO

	ноја	Time	ន	tand	dards	3: (	1, 1	; 11	=<109	5)
	пота	TTIME	S	urro	ogate	es		Inte	rnal.	s
Sample Number	Aro	A11	1	2	3	4	1	2	3	4
V5T0050										
VBLK072403-2										
VLC5072403-2					, i					
VLC5072403-2	4									
SB-13 (1-3)										
58-14 (1-3)					1	-				
58-15 (1-3)					1 1					
SB-16 (1-3)					1					
-58-67(9-6)										
5B-08 (4-6) greenly to law la	4									
					1					
					!					
		<u></u>			1 1 1 1					
										-
S/MSD OK? YES NO Comment:					1				<u> </u>	

LCS OK?

YES

Comment: LCS: 136%

Comment: LCS: 136%

Q-146%; 0D-131%; J-132%

	IC Date	: <u>7/22/03</u>	CC Date:	7/24/03	Resulting Action
COMPOUND	< 0.05	> 30%	< 0.05	> 25%	"J", "UJ", "R" (Hit/Non-Detect)
Trichlas Place morane		31.12			- If = Non Target
Trichlor floor mone		90.06			<i>5</i> /-
				i	
				ŧ	
				i	
				¥ .	
					<u> </u>
		<u> </u>		<u> </u>	

METHOD	BLANK: O/C	FIELD BLANK: O/C	TRIP	BLANK:	OVC

Date: August 29, 2005

CLIENT:

Camp, Dresser and McKee

0307169 Work Order:

Project:

Page 109 of 495

22171-37617, Former Morsey Site

# ANALYTICAL QC SUMMARY REPORT

BatchID: 6973

Sample ID 0307169-004AMS	SampType: MS	TestCo	de: VOC_503	5 Units: mg/K	g-dry	Prep Da	te: <b>07/22/</b> 0	<b>13</b>		A-1_030724	A
Client ID: SB-09 (2'-4')	Batch ID: 6973	Test	lo: SW5035/8	260		Analysis Da	te: 07/24/0	3	SeqNo: 16	7667	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetone	0.07456	0.026	0.05197	0	143	70	130	0	0		s
- Benzene	0.02213	0.0052	0.05197	0.002434	37.9	37	151	0	0		
Bromodichloromethane	0.01795	0.0052	0.05197	0	34.5	70	130	0	0		S
Bromoform	0.01352	0.0052	0.05197	0	26	70	130	0	0		S
Bromomethane	0.04173	0.010	0.05197	0	80.3	70	130	0	0		
2-Butanone	0.03637	0.010	0.05197	0	70	70	130	0	0		S
Carbon disulfide	0.03144	0.0052	0.05197	0	60.5	70	130	Ö	0		S
Carbon tetrachloride	0.02676	0.0052	0.05197	0	51.5	70	130	0	0		S
Chlorobenzene	0.009147	0.0052	0.05197	0	17.6	37	160	0	0		S
Dibromochloromethane	0.01495	0.0052	0.05197	0	28.8	70	130	0	0		S
Chloroethane	0.04457	0.010	0.05197	0	85.8	70	130	0	0		
Chloroform	0.02644	0.0052	0.05197	. 0	50.9	70	130	0	0		S
Chloromethane	0.04533	0.0052	0.05197	Ó	87.2	70	130	0	.0		
1,1-Dichloroethane	0.03464	0.0052	0.05197	0	66.7	70	130	0	0		S
1.2-Dichloroethane	0.0246	0.0052	0.05197	. 0	47.3	70	130	0	0		S
1.1-Dichloroethene	0.03994	0.0052	0.05197	0	76.9	0	234	0	0		
cis-1,2-Dichloroethene	0.02504	0.0052	0.05197	0	48.2	70	130	0	0		S
trans-1,2-Dichloroethene	0.0274	0.0052	0.05197	0	52.7	70	130	0	0	:	S
1,2-Dichloropropane	0.02164	0.0052	0.05197	0	41.6	70	130	0	0		S
cis-1,3-Dichloropropene	0.01239	0.0052	0.05197	O	23.8	70	130	0	0		S
trans-1,3-Dichloropropene	0.01203	0.0052	0.05197	0	23.1	70	130	0	. 0		S
Ethylbenzene	0.007816	0.0052	0.05197	0.001784	11.6	70	130	0	0		S
2-Hexanone	0.02866	0.010	0.05197	0	55.1	70	130	0	0		s
4-Methyl-2-pentanone	0.03205	0.010	0.05197	0	61.7	70	130	0	0		S
Methylene chloride	0.03127	0.010	0.05197	0	60.2	70	130	0	0	) :	S
Styrene	0.007702	0.0052	0.05197	. 0	14.8	70	130	0	C	1	S
1.1.2.2-Tetrachloroethane	0.01625	0.0052	0.05197	0	31.3	70	130	0	0	r i de la Companya d	S
Tetrachloroethene	0.01005	0.0052	0.05197	Ö	19.3	70	130	0	C	) y	S
Toluene	0.01338	0.0052	0.05197	0.005712	14.7	47	150	0	C	)	S
1,1,1-Trichloroethane	0.03072	0.0052	0.05197	0	59.1	70	130	0	C		S

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

Page I of 3

Camp, Dresser and McKec CLIENT:

# COPY ANALYTICAL QC SUMMARY REPORT

Work Order:

Project:

0307169

22171-37617, Former Morsey Site

BatchID: 6973

Sample ID 0307169-004AMS Client ID: SB-09 (2'-4')	SampType: MS Batch ID: 6973		le: VOC_5035 lo: SW5035/8:		-	Prep Dat Analysis Dat			Run ID: VO. SeqNo: 167		i.
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
1,1,2-Trichloroethane	0.01866	0.0052	0.05197	0	35.9	70	130	0	0		S
Trichloroethene	0.01611	0.0052	0.05197	0	31	71	157	0	0		S
Vinyl chloride	0.04715	0.0052	0.05197	.0	90.7	70	130	0	0		
Surr: 1,2-Dichloroethane-d4	0.06051	0	0.05197	0	116	78	160	0	0		
Surr: 4-Bromofluorobenzene	0.05039	0	0.05197	0	97	44	114	0	0		
Surr: Dibromofluoromethane	0.05415	0	0.05197	0	104	74	150	0	0.		
Surr: Toluene-d8	0.05279	0	0.05197	0	102	62	122	0	0		
Sample ID 0307169-004AMSD	SampType: MSD	TestCo	de: VOC_5035	5 Units: mg/l	Kg-dry	Prep Dal	te: 07/22/0	13	Run ID: VO	A-1_030724/	A
Client ID: SB-09 (2'-4')	Batch ID: 6973	Test	lo: SW5035/8	260		Analysis Da	te: 07/24/0	)3	SeqNo: 16	7668	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qı
Acetone	0.05212	0.025	0.05058	0	103	70	130	0.07456	35.4	25	ı
Benzene	0.01539	0.0051	0.05058	0.002434	25.6	37	151	0.02213	35.9	25	S
Bromodichloromethane	0.01103	0.0051	0.05058	0	21.8	70	130	0.01795	47.8	25	S
Bromoform	0.006394	0.0051	0.05058	0	12.6	70	130	0.01352	71.6	25	S
Bromomethane	0.0365	0.010	0.05058	-0	72.2	70	130	0.04173	13.4	25	
2-Butanone	0.02776	0.010	0.05058	0	54.9	70	130	0.03637	26.8	25	. 8
Carbon disulfide	0.03238	0.0051	0.05058	0	64	70	130	0.03144	2.95	25	
Carbon tetrachloride	0.02057	0.0051	0.05058	0	40.7	70	130	0.02676	26.2	25	5
Chlorobenzene	0.004279	0.0051	0.05058	0	8.46	37	160	0.009147	0	25	
Dibromochloromethane	0.007689	0.0051	0.05058	0	15.2	70	130	0.01495	64.1	25	
Chloroethane	0.04258	0.010	0.05058	0	84.2	70	130	0.04457	4.56	25	
Chloroform	0.01932	0.0051	0.05058	0	38.2	70	130	0.02644	31.1	25	
Chloromethane	0.04195	0.0051	0.05058	0	82.9	70	130	0.04533	7.73	25	
1.1-Dichloroethane	0.02765	0.0051	0.05058	o	54.7	70	130	0.03464	22.5		
1.2-Dichloroethane	0.01593	0.0051	0.05058	0	31.5	70	130	0.0246	42.8		
1.1-Dichloroethene	0.03433	0.0051	0.05058	0	67.9	0	234	0.03994	15.1		
cis-1.2-Dichloroethene	0.01852	0.0051	0.05058		36.6	70	130	0.02504	29.9		
trans-1,2-Dichloroethene	0.02166	0.0051	0.05058	0	42.8	70	130	0.0274	23.4		
1,2-Dichloropropane	0.01422	0.0051	0.05058	.0	28.1	70	130	0.02164	41.4	25	i :

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Page 2 of 3

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

Project:

Page 111 of 495

Camp, Dresser and McKee

Work Order: 0307169

22171-37617, Former Morsey Site

COPY

# ANALYTICAL QC SUMMARY REPORT

BatchID: 6973

Sample ID 0307169-004AMSD Client ID: SB-09 (2'-4')	SampTyr Batch I	D: 6973		de: VOC_5035 do: SW5035/8	· · · · · · <del>-</del>		Prep Date Analysis Date			Run ID: VC SeqNo: 16	)A-1_030724/ 7668	A
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
cis-1,3-Dichloropropene		0.009145	0.0051	0.05058	0	18.1	.70	130	0.01239	30.1	25	SR
trans-1,3-Dichloropropene		0.008103	0.0051	0.05058	0	16	70	130	0.01203	39.0	25	SR
Ethylbenzene		0.003632	0.0051	0.05058	0.001784	3.65	70	130	0.007816	0	25	JS
2-Hexanone		0.01782	0.010	0.05058	0	35.2	70	130	0.02866	46.7	25	SR
4-Methyl-2-pentanone		0.02116	0.010	0.05058	0	41.8	70	130	0.03205	40.9	25	SR
Methylene chloride		0.02356	0.010	0.05058	0	46.6	70	130	0.03127	28.1	25	SR
Styrene		0.003045	0.0051	0.05058	0	6.02	70	130	0.007702	0	25	JS
1,1,2,2-Tetrachloroethane		0.007496	0.0051	0.05058	0	14.8	70	130	0.01625	73.7	25	SR
Tetrachloroethene		0.006019	0.0051	0.05058	0	11.9	70	130	0.01005	50.2	25	SR
- Toluene		0.007931	0.0051	0.05058	0.005712	4.39	47	150	0.01338	51.1	25	SR
1,1,1-Trichloroethane		0.0235	0.0051	0.05058	0	46.5	70	130	0.03072	26.6	25	SR
1,1,2-Trichloroethane		0.01041	0.0051	0.05058	0	20.6	70	130	0.01866	56.7	25	SR
- Trichloroethene		0.0106	0.0051	0.05058	0	21	71	157	0.01611	41.2	25	SR
Vinyl chloride		0.04504	0.0051	0.05058	0	89	70	130	0.04715	4.57	25	
Surr: 1,2-Dichloroethane-d4		0.05952	0	0.05058	0	118	78	160	0	0	0	
Surr: 4-Bromofluorobenzene		0.04912	0	0.05058	0	97.1	44	114	. 0	0	0	
Surr: Dibromofluoromethane		0.05679	0	0.05058	0	112	74	150	0	0	0	
Surr: Toluene-d8		0.05233	0	0.05058	0	103	62	122	0	0	. 0	

S - Spike Recovery outside accepted recovery limits

#### 5A



# VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK BROMOFLUOROBENZENE (BFB)

Lab Name:	STAT Analysis		Contract:	
Lab Code:	037169	Case No.:	SAS No.:	SDG No.:
Lab File ID:	07240301.D		BFB Injection I	Date: 07/24/2003
Instrument I	D: VOC-2		BFB Injection	Time: 8:09
GC Column		0: 0.18 (mm)	Heated Purge:	(Y/N) <u>Y</u>
m/e	ION ABUNE	ANGE CRITERIA		% RELATIVE ABUNDANCE
50	3.0 - 40.0% of ma	ss 95		21.4
	30.0 - 66.0% of m			50.2
95	Base peak, 100%	relative abundance	and an artist of the second se	100.0
	5.0 - 9.0% of mas	-	age of the American Control of	6.5
	Less than 2.0% of	mass 174		0.0 ( 0.0)1
174	50.0 - 120.0% of i	nass 95	×.	62.5
175	4.0 - 9.0% of mas	s 174	An American Control of the Control o	4.4 ( 7.0)1
176	93.0 - 101.0% of i	nass 174		61.7 ( 98.8)1
	5.0 - 9.0% of mas	s 176		3.9 ( 6.3)2
٠. <del></del> ٠. <del></del>	1 Value is % ma	e 17/	2-Value is % mass 1	76

# THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA	LAB	LAB	DATE	TIME
SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED	ANALYZED
01: VSTD050	VSTD050	07240302.D	07/24/2003	8:28
02 VBLK072403-2	VBLK072403-2	07240303.D	07/24/2003	9:03
03 VLCS072403-2	VLCS072403-2	07240304.D	07/24/2003	9:37
04 VLCSD072403-2	VLCSD072403-2	07240305.D	07/24/2003	10:12
05 SB-13 (1'-3')	SAMP 0307169-009A	07240310.D	07/24/2003	13:07
06 SB-14 (1'-3')	SAMP 0307169-010A	07240311.D	07/24/2003	13:42
07 SB-15 (1'-3')	SAMP 0307169-011A	07240312.D	07/24/2003	14:17
08 BS-16 (1'-3')	SAMP 0307169-012A	07240313.D	07/24/2003	14:51
09; SB-07 (4'-6')-	SAMP 0307169-002A	07240314.D	07/24/2003	15:26
(2000	1.			

Qualified Data Reports

MOR 08664



Date: July 25, 2003

Client:	Camp, Dresser and McKee	
Project:	22171-37617, Former Morsey Site	Work Order Sample Summary
Lab Order:	0307169	

	<u>and the control of the state of the control of the</u>	<u> </u>		
Lab Sample ID	Client Sample ID	ag Number	Collection Date	Date Received
0307169-001A	SB-07 (4'-6')		7/18/2003 8:55:00 AM	7/18/2003
0307169-001B	SB-07 (4'-6')		7/18/2003 8:55:00 AM	7/18/2003
0307169-002A	SB-08 (4'-6')		7/18/2003 9:40:00 AM	7/18/2003
0307169-002B	SB-08 (4'-6')		7/18/2003 9:40:00 AM	7/18/2003
0307169-003A	SB-08D		7/18/2003 9:45:00 AM	7/18/2003
0307169-003B	SB-08D		7/18/2003 9:45:00 AM	7/18/2003
0307169-004A	SB-09 (2'-4')		7/18/2003 10:20:00 AM	7/18/2003
0307169-004B	SB-09 (2'-4')		7/18/2003 10:20:00 AM	7/18/2003
0307169-005A	SB-10 (1'-3')		7/18/2003 11:00:00 AM	7/18/2003
0307169-005B	SB-10 (1'-3')		7/18/2003 11:00:00 AM	7/18/2003
0307169-006A	FB-01		7/18/2003 11:10:00 AM	7/18/2003
0307169-007A	SB-11 (1'-3')		7/18/2003 11:40:00 AM	7/18/2003
0307169-007B	SB-11 (1'-3')		7/18/2003 11:40:00 AM	7/18/2003
0307169-008A	SB-12 (1'-3')		7/18/2003 11:55:00 AM	7/18/2003
0307169-008B	SB-12 (1'-3')		7/18/2003 11:55:00 AM	7/18/2003
0307169-009A	SB-13 (1'-3')		7/18/2003 12:20:00 PM	7/18/2003
0307169-009B	SB-13 (1'-3')		7/18/2003 12:20:00 PM	7/18/2003
0307169-010A	SB-14 (1'-3')		7/18/2003 12:45:00 PM	7/18/2003
0307169-010B	SB-14 (1'-3')		7/18/2003 12:45:00 PM	7/18/2003
0307169-011A	SB-15 (1'-3')		7/18/2003 1:15:00 PM	7/18/2003
0307169-011B	SB-15 (1'-3')	ALC: A	7/18/2003 1:15:00 PM	7/18/2003
0307169-012A	SB-16 (1'-3')		7/18/2003 1:35:00 PM	7/18/2003
0307169-012B	SB-16 (1'-3')		7/18/2003 1:35:00 PM	7/18/2003
0307169-013A	TB-01		7/18/2003 8:00:00 AM	7/18/2003

**MOR 08665** 

COPY No



2201 West Campbell Park Drive Chicago, IL 60612-3547
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATanalysis.com

Date Reported: July 25, 2003

Date Printed: July 25, 2003

Client:

Camp, Dresser and McKee

Lab Order: 0307169

Project: 22171-37617, Former Morsey Site

Lab ID: 0307169-001

Client Sample ID: SB-07 (4'-6')

Collection Date: 7/18/2003 8:55:00 AM

Matrix: Soil

Analyses	Result	Limit Qual	Units	DF	Date Analyzed
/olatile Organic Compounds by GC/MS	SW	/5035/8260B	Prep Date	7/22/2003	Analyst: PS
Acetone	ND	0.026 少丁	mg/Kg-dry	1	7/24/2003
Benzene	ND	0.0051	mg/Kg-dry	1	7/24/2003
Bromodichloromethane	ND	0.0051	mg/Kg-dry	1	7/24/2003
Bromoform	ND	0.0051 レブ	mg/Kg-dry	1.	7/24/2003
Bromomethane	ND	0.01	mg/Kg-dry	1 "	7/24/2003
2-Butanone	ND	0.01 レブ	mg/Kg-dry	1	7/24/2003
Carbon disulfide	ND	0.0051	mg/Kg-dry	1	7/24/2003
Carbon tetrachloride	ND	0.0051	mg/Kg-dry	1	7/24/2003
Chlorobenzene	ND	0.0051 シナ	mg/Kg-dry	1	7/24/2003
Dibromochloromethane	ND	0.0051 レナ	mg/Kg-dry	1	7/24/2003
Chloroethane	ND	0.01	mg/Kg-dry	11	7/24/2003
Chloroform	ND	0.0051	mg/Kg-dry	1	7/24/2003
Chloromethane	ND	0.0051	mg/Kg-dry	1	7/24/2003
1,1-Dichloroethane	ND	0.0051	mg/Kg-dry	. 1	7/24/2003
1,2-Dichloroethane	ND .	0.0051	mg/Kg-dry	1	7/24/2003
1,1-Dichloroethene	ND	0.0051	mg/Kg-dry	1	7/24/2003
cis-1,2-Dichloroethene	ND	0.0051	mg/Kg-dry	1	7/24/2003
trans-1,2-Dichloroethene	ND	0.0051	mg/Kg-dry	1	7/24/2003
1,2-Dichloropropane	ND	0.0051	mg/Kg-dry	. 1	7/24/2003
cis-1,3-Dichloropropene	ND	0.0051	mg/Kg-dry	1	7/24/2003
trans-1,3-Dichloropropene	ND	0.0051 レブ	mg/Kg-dry	1	7/24/2003
Ethylbenzene	ND	0.0051 レナ	mg/Kg-dry	1	7/24/2003
2-Hexanone	ND	0.01 し丁	mg/Kg-dry	1	7/24/2003
4-Methyl-2-pentanone	ND	0.01	mg/Kg-dry	1	7/24/2003
Methylene chloride	0.015	0.01	mg/Kg-dry	. 1	7/24/2003
Styrene	ND	0.0051 シテ	mg/Kg-dry	1	7/24/2003
1,1,2,2-Tetrachioroethane	ND ND	0.0051 UJ	mg/Kg-dry	. 1	7/24/2003
Tetrachloroethene	ND	0.0051 ひ丁	mg/Kg-dry	1	7/24/2003
Toluene	0.0058	0.0051	mg/Kg-dry	1	7/24/2003
1,1,1-Trichloroethane	ND	0.0051	mg/Kg-dry	1	7/24/2003
1,1,2-Trichloroethane	ND	0.0051 レブ	mg/Kg-dry	1.	7/24/2003
Trichloroethene	ND	0.0051	mg/Kg-dry	1	7/24/2003
Vinyl chloride	ND	0.0051	mg/Kg-dry	1	7/24/2003
m,p-Xylene	ND	0.0051 UT	mg/Kg-dry	1	7/24/2003
o-Xylene	ND	ري 0.0051	mg/Kg-dry	1	7/24/2003
ercent Moisture	D22	16	Prep Date:	7/18/2003	Analyst: RW
Percent Moisture	15.99	0.01	wt%	1	7/19/2003

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Page 1 of 13





2201 West Campbell Park Drive Chicago, IL 60612-3547 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATanalysis.com

> Date Reported: July 25, 2003 Date Printed: July 25, 2003

Client:

Camp, Dresser and McKee

Lab Order:

0307169

22171-37617, Former Morsey Site

Project: Lab ID:

0307169-002

Client Sample ID:

SB-08 (4'-6')

Collection Date:

7/18/2003 9:40:00 AM

Matrix: Soil

Analyses	Result	Limit Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by GC/MS	SW	5035/8260B	Prep Date	: 7/22/2003	Analyst: MP
Acetone	ND	0.024 レブ		1	7/24/2003
Benzene	ND	0.0048	mg/Kg-dry	1	7/24/2003
Bromodichloromethane	ND	0.0048	mg/Kg-dry	1	7/24/2003
Bromoform	ND	0.0048	mg/Kg-dry	1	7/24/2003 7/24/2003
Bromomethane	ND	0.0097	mg/Kg-dry	1	7/24/2003
2-Butanone	ND	0.0097 レブ	mg/Kg-dry	1	7/24/2003
Carbon disulfide	ND	0.0048	mg/Kg-dry	1	7/24/2003
Carbon tetrachloride	ND	0.0048	mg/Kg-dry	1	7/24/2003
Chlorobenzene	ND	0.0048	mg/Kg-dry	1	7/24/2003
Dibromochloromethane	ND	0.0048	mg/Kg-dry	1	7/24/2003
Chloroethane	ND	0.0097	mg/Kg-dry	1	7/24/2003
Chloroform	ND	0.0048	mg/Kg-dry	1	7/24/2003
Chloromethane	ND	0.0048	mg/Kg-dry	1	7/24/2003
1,1-Dichloroethane	ND	0.0048	mg/Kg-dry	1	7/24/2003
1,2-Dichloroethane	ND	0.0048	mg/Kg-dry	1	7/24/2003
1,1-Dichloroethene	ND	0.0048	mg/Kg-dry	1	7/24/2003
cis-1,2-Dichloroethene	ND	0.0048	mg/Kg-dry	1	7/24/2003
trans-1,2-Dichloroethene	ND	0.0048	mg/Kg-dry	1	7/24/2003
1,2-Dichloropropane	ND	0.0048	mg/Kg-dry	1	7/24/2003
cis-1,3-Dichloropropene	ND	0.0048	mg/Kg-dry	1	7/24/2003
trans-1,3-Dichloropropene	ND .	0.0048	mg/Kg-dry	1	7/24/2003
Ethylbenzene	ND	0.0048	mg/Kg-dry	1	7/24/2003
2-Hexanone	ND	0.0097	mg/Kg-dry	1.	7/24/2003
4-Methyl-2-pentanone	ND	0.0097 レゴ	mg/Kg-dry	1	7/24/2003
Methylene chloride	ND	0.0097	mg/Kg-dry	1	7/24/2003
Styrene	ND	0.0048	mg/Kg-dry	1	7/24/2003
1,1,2,2-Tetrachloroethane	ND	0.0048	mg/Kg-dry	1	7/24/2003
Tetrachloroethene	0.13	0.0048	mg/Kg-dry	1	7/24/2003
Toluene	ND	0.0048	mg/Kg-dry	1	7/24/2003
1,1,1-Trichloroethane	ND	0.0048	mg/Kg-dry	1	7/24/2003
1,1,2-Trichloroethane	ND	0.0048	mg/Kg-dry	1	7/24/2003
Trichloroethene	ND	0.0048	mg/Kg-dry	1	7/24/2003
Vinyl chloride	ND	0.0048	mg/Kg-dry	1	7/24/2003
m,p-Xylene	ND	0.0048	mg/Kg-dry	1	7/24/2003
o-Xylene	ND	0.0048	mg/Kg-dry	1	7/24/2003
ercent Moisture	D22	16	Prep Date:	7/18/2003	Analyst: RW
Percent Moisture	11.53	0.01	wt%	1	7/19/2003

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quanititation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Page 2 of 13



2201 West Campbell Park Drive Chicago, IL 60612-3547 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATanalysis.com





Date Reported:

July 25, 2003

Date Printed:

July 25, 2003

Client:

Lab ID:

Camp, Dresser and McKee

Lab Order: Project:

0307169

22171-37617, Former Morsey Site

0307169-003

Client Sample ID: SB-08D

**Collection Date:** 7/18/2003 9:45:00 AM

Matrix:

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by GC/MS	SW	/5035/8260	В	Prep Date:	7/22/2003	Analyst: PS
Acetone	ND	0.024	U5	mg/Kg-dry	1	7/24/2003
Benzene	. ND	0.0047		mg/Kg-dry	1	7/24/2003
Bromodichloromethane	ND	0.0047		mg/Kg-dry	(4) Last (	7/24/2003
Bromoform	ND	0.0047		mg/Kg-dry	11	7/24/2003
Bromomethane	ND	0.0094		mg/Kg-dry	1	7/24/2003
2-Butanone	ND	0.0094	U5"	mg/Kg-dry	1	7/24/2003
Carbon disulfide	ND	0.0047		mg/Kg-dry	1	7/24/2003
Carbon tetrachloride	ND	0.0047		mg/Kg-dry	1	7/24/2003
Chlorobenzene	ND	0.0047		mg/Kg-dry	1	7/24/2003
Dibromochloromethane	ND	0.0047		mg/Kg-dry	1	7/24/2003
Chloroethane	_ ND	0.0094		mg/Kg-dry	1	7/24/2003
Chloroform	ND	0.0047		mg/Kg-dry	1 :	7/24/2003
Chloromethane	ND	0.0047		mg/Kg-dry	1 .	7/24/2003
1,1-Dichloroethane	ND	0.0047		mg/Kg-dry	1 .	7/24/2003
1,2-Dichloroethane	ND	0.0047		mg/Kg-dry	4	7/24/2003
1,1-Dichloroethene	ND	0.0047		mg/Kg-dry	1	7/24/2003
cis-1,2-Dichloroethene	ND	0.0047		mg/Kg-dry	1	7/24/2003
rans-1,2-Dichloroethene	ND	0.0047		mg/Kg-dry	1	7/24/2003
1,2-Dichloropropane	ND	0.0047		mg/Kg-dry	1	7/24/2003
cis-1,3-Dichloropropene	ND	0.0047		mg/Kg-dry	1	7/24/2003
rans-1,3-Dichloropropene	ND	0.0047		mg/Kg-dry	1	7/24/2003
Ethylbenzene	ND	0.0047		mg/Kg-dry	1	7/24/2003
-Hexanone	ND	0.0094		mg/Kg-dry	1	7/24/2003
-Methyl-2-pentanone	ND	0.0094		mg/Kg-dry	1	7/24/2003
lethylene chloride	ND	0.0094		mg/Kg-dry	1	7/24/2003
Styrene	ND	0.0047		mg/Kg-dry	1	7/24/2003
,1,2,2-Tetrachloroethane	ND	0.0047		mg/Kg-dry	1	7/24/2003
Tetrachloroethene	0.19	0.0047		mg/Kg-dry	1	7/24/2003
oluene	ND	0.0047		mg/Kg-dry	1	7/24/2003
,1,1-Trichloroethane	ND	0.0047		mg/Kg-dry	1	7/24/2003
,1,2-Trichloroethane	ND	0.0047		mg/Kg-dry	1	7/24/2003
richloroethene	ND	0.0047		mg/Kg-dry	1	7/24/2003
/inyl chloride	ND	0.0047		mg/Kg-dry	1	7/24/2003
n,p-Xylene	ND	0.0047		mg/Kg-dry	1	7/24/2003
-Xylene	ND	0.0047		mg/Kg-dry	1	7/24/2003
ercent Moisture	D22	16		Prep Date: 7	7/18/2003	Analyst: RW
Percent Moisture	11.44	0.01		wt%	1	7/19/2003

Qualifiers:

- ND Not Detected at the Reporting Limit
- J Analyte detected below quantitation limits
- B Analyte detected in the associated Method Blank
- \* Value exceeds Maximum Contaminant Level
- S Spike Recovery outside accepted recovery limits
- R RPD outside accepted recovery limits
- E Value above quantitation range

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2201 West Campbell Park Drive Chicago, IL 60612-3547
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATanalysis.com





Date Reported:

July 25, 2003

Date Printed:

July 25, 2003

Client:

Camp, Dresser and McKee

Lab Order:

0307169

U3U/109

Project:

22171-37617, Former Morsey Site

Lab ID:

0307169-004

Client Sample ID: S

SB-09 (2'-4')

Collection Date: 7/18/2003 10:20:00 AM

وفاخت المتالك

Matrix: Soil

Analyses	Result	Limit C	)ual	Units	DF	Date Analyzed
Volatile Organic Compounds by GC/MS	sw	5035/8260E	3	Prep Date:	7/22/2003	Analyst: PS
Acetone	ND	0.03 4	15	mg/Kg-dry	1	7/24/2003
Benzene	ND	0.006		mg/Kg-dry	1	7/24/2003
Bromodichloromethane	ND	0.006	15	mg/Kg-dry	1 1	7/24/2003
Bromoform	ND	0.006 &	15	mg/Kg-dry	1	7/24/2003
Bromomethane	ND	0.012		mg/Kg-dry	1	7/24/2003
2-Butanone	ND	0.012	'J	mg/Kg-dry	1	7/24/2003
Carbon disulfide	ND	ن 0.006	15	mg/Kg-dry	1	7/24/2003
Carbon tetrachloride	ND	0.006 L	J	mg/Kg-dry	1	7/24/2003
Chlorobenzene	ND	0.006	J	mg/Kg-dry	1 .	7/24/2003
Dibromochloromethane	ND	0.006 i	15	mg/Kg-dry	1	7/24/2003
Chloroethane	ND	0.012		mg/Kg-dry	1	7/24/2003
Chloroform	ND	ے 200.0	15	mg/Kg-dry	1	7/24/2003
Chloromethane	ND	0.006		mg/Kg-dry	1	7/24/2003
1,1-Dichloroethane	ND	0.006	J	mg/Kg-dry	1	7/24/2003
1,2-Dichloroethane	ND	ن 0.006	15	mg/Kg-dry	1	7/24/2003
1,1-Dichloroethene	ND	0.006		mg/Kg-dry	1	7/24/2003
cis-1,2-Dichloroethene	ND	0.006	15	mg/Kg-dry	1	7/24/2003
trans-1,2-Dichloroethene	ND	0.006	Ì	mg/Kg-dry	- 1	7/24/2003
1,2-Dichloropropane	ND	0.006		mg/Kg-dry	1	7/24/2003
cis-1,3-Dichloropropene	ND	0.006		mg/Kg-dry	1	7/24/2003
trans-1,3-Dichloropropene	ND	0.006		mg/Kg-dry	1	7/24/2003
Ethylbenzene	ND	0.006		mg/Kg-dry	1	7/24/2003
2-Hexanone	ND	0.012		mg/Kg-dry	1	7/24/2003
4-Methyl-2-pentanone	ND	0.012		mg/Kg-dry	1	7/24/2003
Methylene chloride	ND	0.012		mg/Kg-dry	1	7/24/2003
Styrene	ND	0.006		mg/Kg-dry	1	7/24/2003
1,1,2,2-Tetrachloroethane	ND	0.006		mg/Kg-dry	1 22 2 22	7/24/2003
Tetrachloroethene	ND	0.006		mg/Kg-dry	1	7/24/2003
Toluene	ND	0,006		mg/Kg-dry	1	7/24/2003
1,1,1-Trichloroethane	ND	0.006		mg/Kg-dry	1	7/24/2003
1,1,2-Trichloroethane	ND	0.006	1_	mg/Kg-dry	1	7/24/2003
Trichloroethene	ND		5	mg/Kg-dry	1	7/24/2003
Vinyl chloride	ND	0.006	~	mg/Kg-dry	1	7/24/2003
m,p-Xylene	ND.	0.006		mg/Kg-dry	1	7/24/2003
o-Xylene	ND	0.006		mg/Kg-dry	1	7/24/2003
Percent Moisture	D22			Prep Date:		Analyst: RW
Percent Moisture	14.89	0.01		wt%	1	7/19/2003

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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9/1st-5



2201 West Campbell Park Drive Chicago, IL 60612-3547 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATanalysis.com





Date Reported: July 25, 2003

July 25, 2003 Date Printed:

Client:

Camp, Dresser and McKee

Client Sample ID: SB-10 (1'-3')

Lab Order:

0307169

**Collection Date:** 

7/18/2003 11:00:00 AM

Project:

22171-37617, Former Morsey Site

Matrix: Soil

Lab ID:

0307169-005

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by GC/MS	<del></del>	/5035/8260	1.5		: 7/22/2003	Analyst: PS
Acetone	ND	0.027	レブ	mg/Kg-dry	. 1	7/24/2003
Benzene	ND	0.0054		mg/Kg-dry	1	7/24/2003
Bromodichloromethane	ND	0.0054		mg/Kg-dry	, <b>1</b>	7/24/2003
Bromoform	ND	0.0054		mg/Kg-dry	1	7/24/2003
Bromomethane	ND	0.011		mg/Kg-dry	· 1· ·	7/24/2003
2-Butanone	ND	0.011	UJ	mg/Kg-dry	. 1	7/24/2003
Carbon disulfide	ND	0.0054		mg/Kg-dry	1	7/24/2003
Carbon tetrachloride	ND	0.0054		mg/Kg-dry	1	7/24/2003
Chlorobenzene	ND	0.0054		mg/Kg-dry	1	7/24/2003
Dibromochloromethane	ND	0.0054		mg/Kg-dry	1	7/24/2003
Chloroethane	ND -	0.011		mg/Kg-dry	1	7/24/2003
Chloroform	ND	0.0054		mg/Kg-dry	1	7/24/2003
Chloromethane	ND	0.0054		mg/Kg-dry	1	7/24/2003
1,1-Dichloroethane	ND	0.0054		mg/Kg-dry	1	7/24/2003
1,2-Dichloroethane	ND	0.0054		mg/Kg-dry	1	7/24/2003
1,1-Dichloroethene	ND .	0.0054		mg/Kg-dry	1	7/24/2003
cis-1,2-Dichloroethene	ND	0.0054		mg/Kg-dry	1	7/24/2003
trans-1,2-Dichloroethene	ND	0.0054		mg/Kg-dry	1	7/24/2003
1,2-Dichloropropane	ND	0.0054		mg/Kg-dry	1	7/24/2003
cis-1,3-Dichloropropene	ND	0.0054		mg/Kg-dry	1	7/24/2003
trans-1,3-Dichloropropene	ND	0.0054		mg/Kg-dry	. 1	7/24/2003
Ethylbenzene	ND	0.0054		mg/Kg-dry	1	7/24/2003
2-Hexanone	ND	0.011		mg/Kg-dry	1	7/24/2003
4-Methyl-2-pentanone	ND	0.011		mg/Kg-dry	1	7/24/2003
Methylene chloride	ND	0.011		mg/Kg-dry	1	7/24/2003
Styrene	ND	0.0054		mg/Kg-dry	1	7/24/2003
1,1,2,2-Tetrachloroethane	ND	0.0054		mg/Kg-dry	1.1.	7/24/2003
Tetrachloroethene	0.0092	0.0054		mg/Kg-dry	1	7/24/2003
Toluene	0.006	0.0054		mg/Kg-dry	1	7/24/2003
1,1,1-Trichloroethane	ND	0.0054		mg/Kg-dry	5. <b>1</b>	7/24/2003
1.1.2-Trichloroethane	ND	0.0054		mg/Kg-dry	1	7/24/2003
Trichloroethene	ND	0.0054		mg/Kg-dry	1	7/24/2003
Vinyl chloride	ND	0.0054		mg/Kg-dry	1	7/24/2003
m,p-Xylene	ND	0.0054		mg/Kg-dry	4	7/24/2003
o-Xylene	ND	0.0054		mg/Kg-dry	1	7/24/2003
ercent Moisture	D22	216		Prep Date:	7/18/2003	Analyst: RW
Percent Moisture	12.42	0.01		wt%	1	7/19/2003

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

\* - Value exceeds Maximum Contaminant Level

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2201 West Campbell Park Drive Chicago, IL 60612-3547
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATanalysis.com





Date Reported:

July 25, 2003

Date Printed:

July 25, 2003

Client:

Camp, Dresser and McKee

Lab Order:

0307169

Project:

22171-37617, Former Morsey Site

Lab ID: 0307169-006

Client Sample ID: FB-01

n n ... n ... n...

Collection Date: 7/18/2003 11:10:00 AM

Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by GC/MS	sw	/8260B		Prep Date:		Analyst: MP
Acetone	ND	0.01	LIJE S	mg/L	1	7/22/2003
Benzene	ND	0.005	7	// <i>5/**</i> mg/L	1	7/22/2003
Bromodichloromethane	ND	0.005		mg/L	1	7/22/2003
Bromoform	ND	0.005	-14	mg/L	1	7/22/2003
Bromomethane	ND	0.01	UT	mg/L	1	7/22/2003
2-Butanone	ND	0.01	bJ 11	√ mg/L	1 .	7/22/2003
Carbon disulfide	ND	0.005		mg/L	1	7/22/2003
Carbon tetrachloride	ND	0.005		mg/L	1	7/22/2003
Chlorobenzene	ND	0.005		mg/L	1	7/22/2003
Dibromochloromethane	ND	0.005		mg/L	1	7/22/2003
Chloroethane	ND	0.01		mg/L	1	7/22/2003
Chloroform	ND	0.005		mg/L	1	7/22/2003
Chloromethane	ND	0.005		mg/L	1	7/22/2003
1,1-Dichloroethane	ND	0.005		mg/L	1	7/22/2003
1,2-Dichloroethane	ND	0.005		mg/L	1	7/22/2003
1,1-Dichloroethene	ND	0.005		mg/L	1	7/22/2003
cis-1,2-Dichloroethene	ND	0.005		mg/L	1	7/22/2003
trans-1,2-Dichloroethene	ND	0.005		mg/L	1	7/22/2003
1,2-Dichloropropane	ND	0.005		mg/L	1	7/22/2003
cis-1,3-Dichloropropene	ND	0.005		mg/L	1	7/22/2003
trans-1,3-Dichloropropene	ND	0.005		mg/L	1	7/22/2003
Ethylbenzene	ND	0.005		mg/L	1	7/22/2003
2-Hexanone	ND	0.01		mg/L	1	7/22/2003
4-Methyl-2-pentanone	ND	0.01		mg/L	1	7/22/2003
Methylene chloride	ND	0.005		mg/L	1	7/22/2003
Styrene	ND	0.005		mg/L	1	7/22/2003
1,1,2,2-Tetrachloroethane	ND	0.005		mg/L	1.	7/22/2003
Tetrachloroethene	ND	0.005		mg/L	1	7/22/2003
Toluene	ND	0.005		mg/L	1	7/22/2003
1,1,1-Trichloroethane	ND	0.005		mg/L	1	7/22/2003
1,1,2-Trichloroethane	ND	0.005		mg/L	1	7/22/2003
Trichloroethene	ND	0.005		mg/L	1	7/22/2003
Vinyl chloride	ND	0.005		mg/L	1	7/22/2003
m,p-Xylene	ND	0.005		mg/L	1	7/22/2003
o-Xylene	ND	0.005		mg/L	1	7/22/2003

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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2201 West Campbell Park Drive Chicago, IL 60612-3547 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATanalysis.com

> Date Reported: July 25, 2003

Date Printed: July 25, 2003

Client:

Camp, Dresser and McKee

Client Sample ID:

SB-11 (1'-3')

Lab Order:

0307169

Collection Date: 7/18/2003 11:40:00 AM

Project:

22171-37617, Former Morsey Site

Matrix: Soil

Lab ID:

0307169-007

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by GC/MS	SM	/5035/826	0B	Prep Date:	7/22/2003	B Analyst: PS
Acetone	ND	0.033	UJ	mg/Kg-dry	1	7/24/2003
Benzene	ND	0.0065		mg/Kg-dry	1	7/24/2003
Bromodichloromethane	ND	0.0065		mg/Kg-dry	1 .	7/24/2003
Bromoform	ND	0.0065	UT	mg/Kg-dry	1	7/24/2003
Bromomethane	ND	0.013		mg/Kg-dry	1	7/24/2003
2-Butanone	ND	0.013	UJ	mg/Kg-dry	1	7/24/2003
Carbon disulfide	ND	0.0065		mg/Kg-dry	. 1	7/24/2003
Carbon tetrachloride	ND	0.0065		mg/Kg-dry	1	7/24/2003
Chlorobenzene	ND	0.0065	UJ	mg/Kg-dry	1	7/24/2003
Dibromochloromethane	ND	0.0065	UJ	mg/Kg-dry	1	7/24/2003
Chloroethane	ND	0.013		mg/Kg-dry	1	7/24/2003
Chloroform	ND	0.0065		mg/Kg-dry	1	7/24/2003
Chloromethane	ND	0.0065		mg/Kg-dry	1	7/24/2003
1,1-Dichloroethane	ND	0.0065		mg/Kg-dry	1	7/24/2003
1,2-Dichloroethane	ND	0.0065		mg/Kg-dry	1	7/24/2003
1,1-Dichloroethene	ND	0.0065		mg/Kg-dry	1 .	7/24/2003
cis-1,2-Dichloroethene	ND	0.0065		mg/Kg-dry	1	7/24/2003
trans-1,2-Dichloroethene	ND	0.0065	W5 94		1	7/24/2003
1,2-Dichloropropane	ND	0.0065		mg/Kg-dry	1	7/24/2003
cis-1,3-Dichloropropene	ND	0.0065		mg/Kg-dry	1	7/24/2003
trans-1,3-Dichloropropene	ND	0.0065	UJ	mg/Kg-dry	1	7/24/2003
Ethylbenzene	ND	0.0065	UJ	mg/Kg-dry	. 1	7/24/2003
2-Hexanone	ND	0.013	UJ	mg/Kg-dry	1	7/24/2003
4-Methyl-2-pentanone	ND	0.013		mg/Kg-dry	1	7/24/2003
Methylene chloride	ND	0.013		mg/Kg-dry	1	7/24/2003
Styrene	ND	0.0065	UJ	mg/Kg-dry	1	7/24/2003
1,1,2,2-Tetrachloroethane	ND		UT	mg/Kg-dry	1	7/24/2003
Tetrachloroethene	ND	0.0065	. James .	mg/Kg-dry	1	7/24/2003
Toluene	0.0069	0.0065		mg/Kg-dry	1	7/24/2003
1,1,1-Trichloroethane	ND	0.0065		mg/Kg-dry	1	7/24/2003
1,1,2-Trichloroethane	ND	0.0065	UT.	mg/Kg-dry	1	7/24/2003
Trichloroethene	ND	0.0065		mg/Kg-dry	1	7/24/2003
√inyl chloride	ND	0.0065		mg/Kg-dry	1	7/24/2003
n,p-Xylene	ND	0.0065	UJ	mg/Kg-dry	1	7/24/2003
o-Xylene	ND		45	mg/Kg-dry	1	7/24/2003
ercent Moisture	D22	16		Prep Date:	7/18/2003	Analyst: RW
Percent Moisture	12.39	0.01		wt%	1	7/19/2003

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

\* - Value exceeds Maximum Contaminant Level

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2201 West Campbell Park Drive Chicago, IL 60612-3547 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATanalysis.com

> Date Reported: July 25, 2003 Date Printed: July 25, 2003

Client: Lab Order: Camp, Dresser and McKee

0307169

Project:

22171-37617, Former Morsey Site

Lab ID:

0307169-008

Client Sample ID:

SB-12 (1'-3')

Collection Date: 7/18/2003 11:55:00 AM

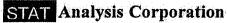
Matrix: Soil

Analyses	Result	Limit Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by GC/MS	sw	/5035/8260B	Prep Date:	7/22/2003	Analyst: PS
Acetone	0.047	0.032 ブ	mg/Kg-dry	1	7/24/2003
Benzene	ND	0.0063	mg/Kg-dry	1	7/24/2003
Bromodichloromethane	ND	0.0063	mg/Kg-dry	1	7/24/2003
Bromoform	ND	0.0063 UT	mg/Kg-dry	1	7/24/2003
Bromomethane	ND	0.013	mg/Kg-dry	1	7/24/2003
2-Butanone	ND	0.013 レブ	mg/Kg-dry	1	7/24/2003
Carbon disulfide	ND	0.0063	mg/Kg-dry	1	7/24/2003
Carbon tetrachloride	ND	0.0063	mg/Kg-dry	1	7/24/2003
Chlorobenzene	ND	0.0063 UJ	mg/Kg-dry	1	7/24/2003
Dibromochloromethane	ND	0.0063 UJ	mg/Kg-dry	1	7/24/2003
Chloroethane	ND	0.013	mg/Kg-dry	1	7/24/2003
Chloroform	ND	0.0063	mg/Kg-dry	1	7/24/2003
Chloromethane	ND	0.0063	mg/Kg-dry	1	7/24/2003
1,1-Dichloroethane	ND	0.0063	mg/Kg-dry	1	7/24/2003
1,2-Dichloroethane	ND	0.0063	mg/Kg-dry	1	7/24/2003
1,1-Dichloroethene	ND	0.0063	mg/Kg-dry	1	7/24/2003
cis-1,2-Dichloroethene	ND	0.0063	mg/Kg-dry	1	7/24/2003
trans-1,2-Dichloroethene	ND	0.0063 ++7.5%	malka-dar	1	7/24/2003
1,2-Dichloropropane	ND	0.0063	mg/Kg-dry	1	7/24/2003
cis-1,3-Dichloropropene	ND	0.0063	mg/Kg-dry	1	7/24/2003
trans-1,3-Dichloropropene	ND ND	0.0063 ひブ	mg/Kg-dry	1	7/24/2003
Ethylbenzene	ND	0.0063 UT	mg/Kg-dry	1	7/24/2003
2-Hexanone	ND	0.013 <i>UI</i>	mg/Kg-dry	1	7/24/2003
4-Methyl-2-pentanone	ND	0.013	mg/Kg-dry	1.	7/24/2003
Methylene chloride	ND .	0.013	mg/Kg-dry	1	7/24/2003
Styrene	ND	0.0063 レブ	mg/Kg-dry	1	7/24/2003
1,1,2,2-Tetrachloroethane	ND	0.0063 レン	mg/Kg-dry	1	7/24/2003
Tetrachloroethene	ND	0.0063 UT	mg/Kg-dry	. 1	7/24/2003
Toluene	ND	0.0063	mg/Kg-dry	1	7/24/2003
1,1,1-Trichloroethane	ND	0.0063	mg/Kg-dry	1	7/24/2003
1,1,2-Trichloroethane	ND	0.0063 レブ	mg/Kg-dry	1	7/24/2003
Trichloroethene	ND	0.0063	mg/Kg-dry	1	7/24/2003
Vinyl chloride	ND	0.0063	mg/Kg-dry	1	7/24/2003
m,p-Xylene	ND	0.0063 シブ	mg/Kg-dry		7/24/2003
o-Xylene	ND	0.0063 UT	mg/kg-ary mg/Kg-dry	1 .1	7/24/2003
	IAD	U.UUG3 &	inging-ury	* • • • • • • • • • • • • • • • • • • •	112412003
ercent Moisture	D22	16	Prep Date:	7/18/2003	Analyst: RW
Percent Moisture	14.65	0.01	wt%	1	7/19/2003

Qualifiers:

- ND Not Detected at the Reporting Limit
- J Analyte detected below quanititation limits
- B Analyte detected in the associated Method Blank
- \* Value exceeds Maximum Contaminant Level
- S Spike Recovery outside accepted recovery limits
- R RPD outside accepted recovery limits
- E Value above quantitation range

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2201 West Campbell Park Drive Chicago, IL 60612-3547
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATanalysis.com

Date Reported:

July 25, 2003

Date Printed:

July 25, 2003

Client:

Camp, Dresser and McKee

Lab Order:

0307169

22171-37617, Former Morsey Site

Project: Lab ID:

0307169-009

Client Sample ID: SB-13 (1'-3')

Collection Date: 7/18/2003 12:20:00 PM

Matrix: Soil

Analyses	Result	Limit Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by GC/MS	SW	/5035/8260B	Prep Date:	7/22/2003	Analyst: MP
Acetone	0.037	0.027	mg/Kg-dry	1	7/24/2003
Benzene	ND	0.0055	mg/Kg-dry	1	7/24/2003
Bromodichloromethane	ND	0.0055	mg/Kg-dry	· · 1	7/24/2003
Bromoform	ND	0.0055	mg/Kg-dry	1	7/24/2003
Bromomethane	ND	0.011	mg/Kg-dry	1	7/24/2003
2-Butanone	ND	0.011 レブ	mg/Kg-dry	1	7/24/2003
Carbon disulfide	ND	0.0055 シブ	mg/Kg-dry	1	7/24/2003
Carbon tetrachloride	ND	0.0055	mg/Kg-dry	1	7/24/2003
Chlorobenzene	ND	0.0055	mg/Kg-dry	1	7/24/2003
Dibromochloromethane	ND	0.0055	mg/Kg-dry	1	7/24/2003
Chloroethane	ND	0.011	mg/Kg-dry	1	7/24/2003
Chloroform	ND	0.0055	mg/Kg-dry	1	7/24/2003
Chloromethane	ND	0.0055	mg/Kg-dry	1	7/24/2003
1,1-Dichloroethane	ND	0.0055	mg/Kg-dry	1	7/24/2003
1,2-Dichloroethane	ND	0.0055	mg/Kg-dry	1 . 9	7/24/2003
1,1-Dichloroethene	ND	0.0055	mg/Kg-dry	1 × 60%	7/24/2003
cis-1,2-Dichloroethene	ND	0.0055	mg/Kg-dry	1	7/24/2003
trans-1,2-Dichloroethene	ND	0.0055	mg/Kg-dry	1 1	7/24/2003
1,2-Dichloropropane	ND	0.0055	mg/Kg-dry	1	7/24/2003
cis-1,3-Dichloropropene	ND .	0.0055	mg/Kg-dry	1	7/24/2003
trans-1,3-Dichloropropene	ND	0.0055	mg/Kg-dry	1	7/24/2003
Ethylbenzene	ND	0.0055	mg/Kg-dry	1	7/24/2003
2-Hexanone	ND	0.011	mg/Kg-dry	1	7/24/2003
4-Methyl-2-pentanone	ND	0.011 ひブ	mg/Kg-dry	1	7/24/2003
Methylene chloride	ND	0.011	mg/Kg-dry	1	7/24/2003
Styrene	ND	0.0055	mg/Kg-dry	1	7/24/2003
1,1,2,2-Tetrachloroethane	ND	0.0055	mg/Kg-dry	1	7/24/2003
Tetrachloroethene	ND	0.0055	mg/Kg-dry	1	7/24/2003
Toluene	ND	0.0055	mg/Kg-dry	1	7/24/2003
1,1,1-Trichloroethane	ND	0.0055	mg/Kg-dry	1	7/24/2003
1,1,2-Trichloroethane	ND	0.0055	mg/Kg-dry	1	7/24/2003
Trichloroethene	ND	0.0055	mg/Kg-dry	1	7/24/2003
Vinyl chloride	ND	0.0055	mg/Kg-dry	1	7/24/2003
m,p-Xylene	ND	0.0055	mg/Kg-dry	1	7/24/2003
o-Xylene	ND	0.0055	mg/Kg-dry	1	7/24/2003
Percent Moisture	D22		Prep Date:	7/18/2003	Analyst: RW
Percent Moisture	17.79	0.01	wt%	1	7/19/2003

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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2201 West Campbell Park Drive Chicago, IL 60612-3547 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATanalysis.com

> July 25, 2003 Date Reported: Date Printed: July 25, 2003

Client:

Camp, Dresser and McKee

0307169

Lab Order: Project: 22171-37617, Former Morsey Site

Lab ID: 0307169-010 Client Sample ID: SB-14 (1'-3')

Collection Date: 7/18/2003 12:45:00 PM

Matrix: Soil

Analyses	Result	Limit Qua	ıl Units	DF	Date Analyzed
Volatile Organic Compounds by GC/MS	SW	5035/8260B	Prep Date:	7/22/2003	Analyst: MP
Acetone	0.043	0.025 J	mg/Kg-dry	1	7/24/2003
Benzene	ND	0.0051	mg/Kg-dry	1 .	7/24/2003
Bromodichloromethane	ND	0.0051	mg/Kg-dry	1	7/24/2003
Bromoform	ND	0.0051	mg/Kg-dry	1	7/24/2003
Bromomethane	ND	0.01	mg/Kg-dry	1	7/24/2003
2-Butanone	ND .	0.01 ひず	mg/Kg-dry	1	7/24/2003
Carbon disulfide	ND	0.0051 ひブ	mg/Kg-dry	1	7/24/2003
Carbon tetrachloride	ND	0.0051	mg/Kg-dry	1	7/24/2003
Chlorobenzene	ND	0.0051	mg/Kg-dry	1	7/24/2003
Dibromochloromethane	ND	0.0051	mg/Kg-dry	1 .	7/24/2003
Chloroethane	ND	0.01	mg/Kg-dry	1	7/24/2003 7/24/2003 7/24/2003
Chloroform	ND	0.0051	mg/Kg-dry	1	7/24/2003
Chloromethane	ND	0.0051	mg/Kg-dry	1	7/24/2003
1,1-Dichloroethane	ND	0.0051	mg/Kg-dry	1 .	7/24/2003
1,2-Dichloroethane	ND	0.0051	mg/Kg-dry	1	7/24/2003
1,1-Dichloroethene	ND	0.0051	mg/Kg-dry	1 .	7/24/2003
cis-1,2-Dichloroethene	ND	0.0051	mg/Kg-dry	1	7/24/2003
trans-1,2-Dichloroethene	ND	0.0051	mg/Kg-dry	1	7/24/2003
1,2-Dichloropropane	ND :	0.0051	mg/Kg-dry	1	7/24/2003
cis-1,3-Dichloropropene	ND	0.0051	mg/Kg-dry	1	7/24/2003
trans-1,3-Dichloropropene	ND	0.0051	mg/Kg-dry	1	7/24/2003
Ethylbenzene	ND	0.0051	mg/Kg-dry	1	7/24/2003
2-Hexanone	ND	0.01	mg/Kg-dry	1	7/24/2003
4-Methyl-2-pentanone	ND	0.01 レブ	mg/Kg-dry	1	7/24/2003
Methylene chloride	ND	0.01	mg/Kg-dry	1	7/24/2003
Styrene	ND	0.0051	mg/Kg-dry	1	7/24/2003
1,1,2,2-Tetrachloroethane	ND	0.0051	mg/Kg-dry	1	7/24/2003
Tetrachloroethene	ND	0.0051	mg/Kg-dry	1	7/24/2003
Toluene	ND	0.0051	mg/Kg-dry	1	7/24/2003
1,1,1-Trichioroethane	ND	0.0051	mg/Kg-dry	1.	7/24/2003
1,1,2-Trichloroethane	ND	0.0051	mg/Kg-dry	1	7/24/2003
Frichloroethene	ND	0.0051	mg/Kg-dry	1	7/24/2003
Vinyl chloride	ND	0.0051	mg/Kg-dry	1	7/24/2003
m,p-Xylene	ND	0.0051	mg/Kg-dry	1	7/24/2003
o-Xylene	ND	0.0051	mg/Kg-dry	1	7/24/2003
ercent Moisture	D22	16	Prep Date: 7	/18/2003	Analyst: RW
Percent Moisture	15.09	0.01	wt%	1	7/19/2003

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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2201 West Campbell Park Drive Chicago, IL 60612-3547
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATanalysis.com

Date Reported: July 25, 2003

Date Printed: July 25, 2003

Client:

Camp, Dresser and McKee

Lab Order: 0307169

ab Order: 050/10

**Project:** 22171-37617, Former Morsey Site

Lab ID: 0307169-011

Client Sample ID: SB-15 (1'-3')

Collection Date: 7/18/2003 1:15:00 PM

Matrix: Soil

Analyses	Result	Limit Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by GC/MS	sw	/5035/8260B	Prep Date:	7/22/2003	Analyst: MP
Acetone	0.052	0.028 J	mg/Kg-dry	1	7/24/2003
Benzene	ND	0.0055	mg/Kg-dry	1	7/24/2003
Bromodichloromethane	ND	0.0055	mg/Kg-dry	1	7/24/2003
Bromoform	ND	0.0055	mg/Kg-dry	1	7/24/2003
Bromomethane	ND	0.011	mg/Kg-dry	1	7/24/2003
2-Butanone	ND	0.011 レブ	mg/Kg-dry	1	7/24/2003
Carbon disulfide	ND	0.0055 レブ	mg/Kg-dry	1	7/24/2003
Carbon tetrachloride	ND	0.0055	mg/Kg-dry	1	7/24/2003
Chlorobenzene	ND	0.0055	mg/Kg-dry	1	7/24/2003
Dibromochloromethane	ND	0.0055	mg/Kg-dry	1	7/24/2003
Chloroethane	ND	0.011	mg/Kg-dry	1	7/24/2003
Chloroform	ND	0.0055	mg/Kg-dry	1	7/24/2003
Chloromethane	ND	0.0055	mg/Kg-dry	1	7/24/2003
1,1-Dichloroethane	ND	0.0055	mg/Kg-dry	1	7/24/2003
1,2-Dichloroethane	ND	0.0055	mg/Kg-dry	1	7/24/2003
1,1-Dichloroethene	ND	0.0055	mg/Kg-dry	1	7/24/2003
cis-1,2-Dichloroethene	ND	0.0055	mg/Kg-dry	1	7/24/2003
trans-1,2-Dichloroethene	ND	0.0055	mg/Kg-dry	1::	7/24/2003
1,2-Dichloropropane	ND	0.0055	mg/Kg-dry	1	7/24/2003
cis-1,3-Dichloropropene	ND	0.0055	mg/Kg-dry	1	7/24/2003
trans-1,3-Dichloropropene	ND	0.0055	mg/Kg-dry	1	7/24/2003
Ethylbenzene	ND	0.0055	mg/Kg-dry	1	7/24/2003
2-Hexanone	ND	0.011	mg/Kg-dry	1	7/24/2003
4-Methyl-2-pentanone	ND	0.011 シブ	mg/Kg-dry	1	7/24/2003
Methylene chloride	ND	0.011	mg/Kg-dry	1	7/24/2003
Styrene	ND	0.0055	mg/Kg-dry	1	7/24/2003
1,1,2,2-Tetrachioroethane	ND	0.0055	mg/Kg-dry	1	7/24/2003
Tetrachloroethene	0.014	0.0055	mg/Kg-dry	1	7/24/2003
Toluene	ND	0.0055	mg/Kg-dry	1	7/24/2003
1,1,1-Trichloroethane	ND	0.0055	mg/Kg-dry	1	7/24/2003
1,1,2-Trichloroethane	ND	0.0055	mg/Kg-dry	1	7/24/2003
Trichloroethene	ND	0.0055	mg/Kg-dry	1	7/24/2003
Vinyl chloride	ND	0.0055	mg/Kg-dry	1	7/24/2003
n,p-Xylene	ND	0.0055	mg/Kg-dry	1	7/24/2003
y-Xylene	ND	0.0055	mg/Kg-dry	1	7/24/2003
ercent Moisture	D22	16	Prep Date: 7/18/2003		Analyst: RW
Percent Moisture	15.45	0.01	wt%	1	7/19/2003

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

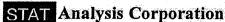
S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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2201 West Campbell Park Drive Chicago, IL 60612-3547 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATanalysis.com





Date Reported:

July 25, 2003

Date Printed:

July 25, 2003

Client:

Camp, Dresser and McKee

Lab Order:

0307169

Project:

22171-37617, Former Morsey Site

Lab ID:

0307169-012

Client Sample ID: SB-16 (1'-3')

Collection Date: 7/18/2003 1:35:00 PM

Matrix: Soil

Analyses	Result	Limit Qual	· Units	DF	Date Analyzed
Volatile Organic Compounds by GC/MS	sw	5035/8260B	Prep Date	7/22/2003	Analyst: MP
Acetone	0.045 g	0.025 ブ	mg/Kg-dry	1	7/24/2003
Benzene	ND	0.005	mg/Kg-dry	1	7/24/2003
Bromodichloromethane	ND	0.005	mg/Kg-dry	1	7/24/2003
Bromoform	ND 1	0.005	mg/Kg-dry	1	7/24/2003
Bromomethane	ND	0.01	mg/Kg-dry	1 -	7/24/2003
2-Butanone	ND	0.01 レブ	mg/Kg-dry	1	7/24/2003
Carbon disulfide	ND	0.005 UJ	mg/Kg-dry	1	7/24/2003
Carbon tetrachloride	ND	0.005	mg/Kg-dry	1	7/24/2003
Chlorobenzene	ND	0.005	mg/Kg-dry	1	7/24/2003
Dibromochloromethane	ND	0.005	mg/Kg-dry	1	7/24/2003
Chloroethane	ND	0.01	mg/Kg-dry	1	7/24/2003
Chloroform	ND	0.005	mg/Kg-dry	1	7/24/2003
Chloromethane	ND	0.005	mg/Kg-dry	1	7/24/2003
1,1-Dichloroethane	ND	0.005	mg/Kg-dry	1	7/24/2003
1,2-Dichloroethane	ND	0.005	mg/Kg-dry	1	7/24/2003
1,1-Dichloroethene	ND	0.005	mg/Kg-dry	1	7/24/2003
cis-1,2-Dichloroethene	ND	0.005	mg/Kg-dry	1	7/24/2003
trans-1,2-Dichloroethene	ND	0.005	mg/Kg-dry	1	7/24/2003
1,2-Dichloropropane	ND	0.005	mg/Kg-dry	1	7/24/2003
cis-1,3-Dichloropropene	ND	0.005	mg/Kg-dry	1	7/24/2003
trans-1,3-Dichloropropene	ND	0.005	mg/Kg-dry	1	7/24/2003
Ethylbenzene	ND	0.005	mg/Kg-dry	1	7/24/2003
2-Hexanone	ND	0.01	mg/Kg-dry	1	7/24/2003
4-Methyl-2-pentanone	ND	0.01 UJ	mg/Kg-dry	1	7/24/2003
Methylene chloride	ND	0.01	mg/Kg-dry	1	7/24/2003
Styrene	ND	0.005	mg/Kg-dry	1	7/24/2003
1,1,2,2-Tetrachloroethane	ND	0.005	mg/Kg-dry	1	7/24/2003
Tetrachloroethene	ND	0.005	mg/Kg-dry	1	7/24/2003
Toluene	ND	0.005	mg/Kg-dry	1	7/24/2003
1,1,1-Trichloroethane	ND	0.005	mg/Kg-dry	1	7/24/2003
1,1,2-Trichloroethane	ND	0.005	mg/Kg-dry	1	7/24/2003
Trichloroethene	ND	0.005	mg/Kg-dry	1	7/24/2003
Vinyl chloride	ND	0.005	mg/Kg-dry	1	7/24/2003
m,p-Xylene	ND	0.005	mg/Kg-dry	1	7/24/2003
o-Xylene	ND	0.005	mg/Kg-dry	1	7/24/2003
ercent Moisture	D22	16	Prep Date:	7/18/2003	Analyst: RW
Percent Moisture	14.39	0.01	wt%	1	7/19/2003

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Date Reported:

July 25, 2003

**Date Printed:** 

July 25, 2003

Client:

Camp, Dresser and McKee

Lab Order:

0307169

Project:

22171-37617, Former Morsey Site

Lab ID: 0307169-013 Client Sample ID: TB-01

Collection Date: 7/18/2003 8:00:00 AM

Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by GC/MS	sw	8260B		Prep Date		Analyst: MP
Acetone	ND :	0.01		mg/L	1	7/22/2003
Benzene	ND	0.005		mg/L	1	7/22/2003
Bromodichloromethane	ND	0.005		mg/L	1	7/22/2003
Bromoform	ND	0.005		mg/L	1	7/22/2003
Bromomethane	ND	0.01	UT	mg/L	1	7/22/2003
2-Butanone	ND	0.01		mg/L	1	7/22/2003
Carbon disulfide	ND	0.005		mg/L	1	7/22/2003
Carbon tetrachloride	ND	0.005		mg/L	1	7/22/2003
Chlorobenzene	ND	0.005		mg/L	1	7/22/2003
Dibromochloromethane	ND	0.005		mg/L	1	7/22/2003
Chloroethane	ND	0.01		mg/L	1	7/22/2003
Chloroform	ND .	0.005		mg/L	1	7/22/2003
Chloromethane	ND	0.005		mg/L	1	7/22/2003
1,1-Dichloroethane	ND	0.005		mg/L	1	7/22/2003
1,2-Dichloroethane	ND	0.005		mg/L	. 1	7/22/2003
1,1-Dichloroethene	ND	0.005	- 14 - 44 	mg/L	1	7/22/2003
cis-1,2-Dichloroethene	ND	0.005		mg/L	1	7/22/2003
trans-1,2-Dichloroethene	ND	0.005		mg/L	.1	7/22/2003
1,2-Dichloropropane	ND	0.005		mg/L	1	7/22/2003
cis-1,3-Dichloropropene	ND	0.005		mg/L	1	7/22/2003
trans-1,3-Dichloropropene	ND	0.005	•	mg/L	1	7/22/2003
Ethylbenzene	ND	0.005		mg/L	1	7/22/2003
2-Hexanone	ND	0.01		mg/L	1	7/22/2003
4-Methyl-2-pentanone	ND	0.01		mg/L	1	7/22/2003
Methylene chloride	ND	0.005		mg/L	1	7/22/2003
Styrene	ND	0.005		mg/L	. 1	7/22/2003
1,1,2,2-Tetrachloroethane	ND	0.005		mg/L	1	7/22/2003
Tetrachloroethene	ND	0.005		mg/L	1	7/22/2003
Toluene	ND	0.005		mg/L	1	7/22/2003
1,1,1-Trichloroethane	ND	0.005		mg/L	1	7/22/2003
1,1,2-Trichloroethane	ND	0.005		mg/L	1	7/22/2003
Trichloroethene	ND	0.005		mg/L	1	7/22/2003
Vinyl chloride	ND	0.005		mg/L	1	7/22/2003
m,p-Xylene	ND	0.005		mg/L	. i	7/22/2003
o-Xylene	ND	0.005		mg/L	1	7/22/2003

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Page 13 of 13